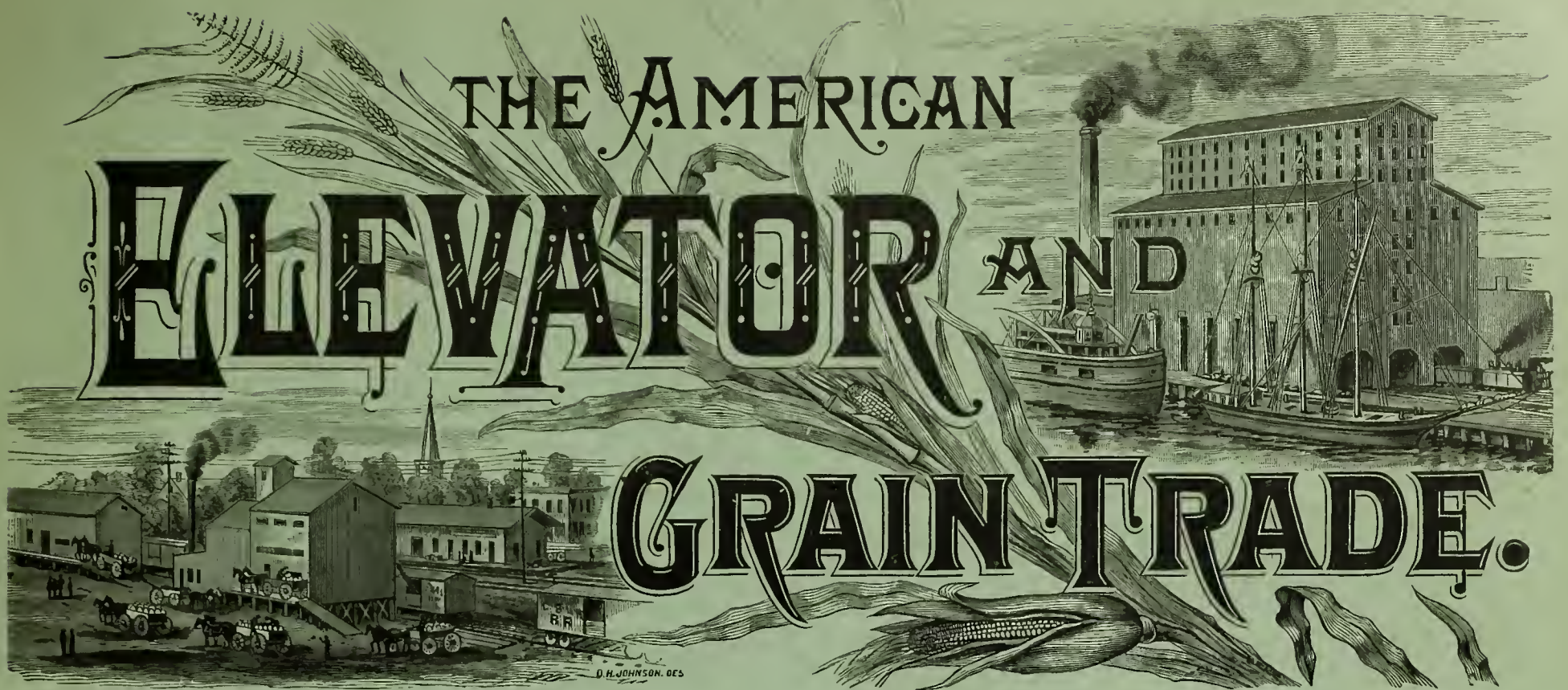


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A MONTHLY JOURNAL DEVOTED TO THE ELEVATOR AND GRAIN INTERESTS.

PUBLISHED BY
MITCHELL BROS. COMPANY,
(INCORPORATED.)

VOL. IX.

CHICAGO, ILLINOIS, MARCH 15, 1891.

No. 9.

SUBSCRIPTION PRICE,
ONE DOLLAR PER ANNUM.

ESTABLISHED 1856.

EUREKA

WAREHOUSE,
DOUBLE RECEIVING,
&
SINGLE RECEIVING,

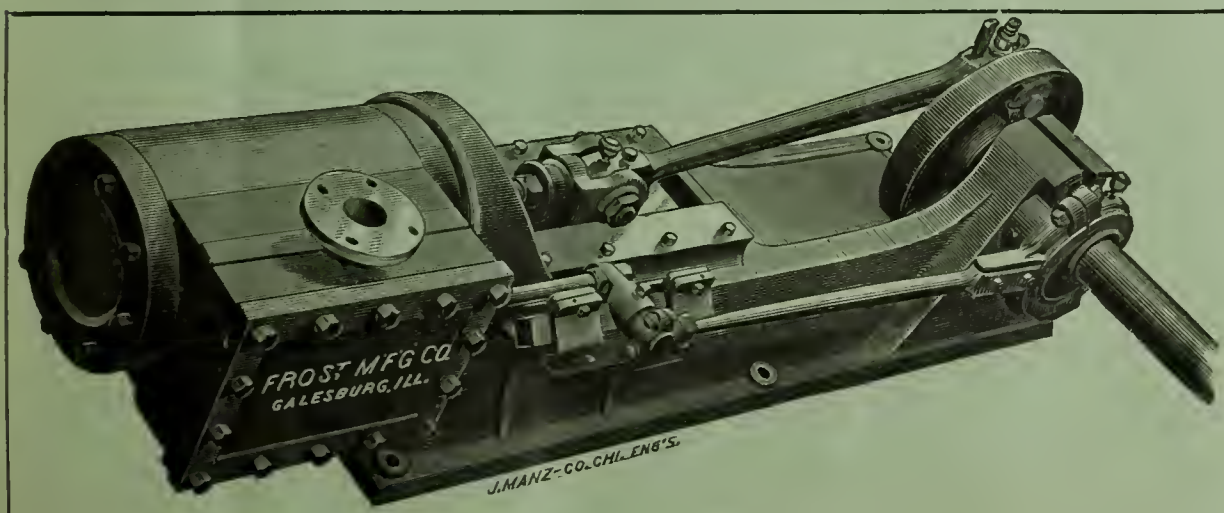
SEPARATORS

Are in every feature
the best and most per-
fectly operating ma-
chines in the world.

More of them are in
use, more of them are
built and more of them
are sold every year
than of any other two
kinds in the world.

S. HOWES, SOLE MANUFACTURER. Silver Creek, N. Y.

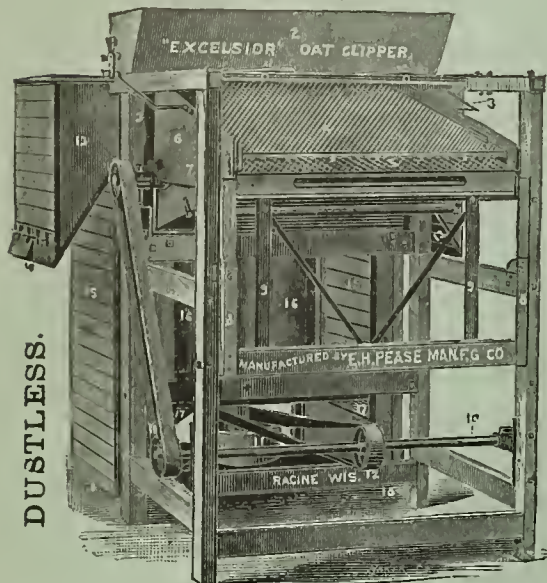
CONVEYORS	* * * Elevator Buckets. * * Elevator Roots. * * Elevator Bolts. * * *			BELTING
	 THORNBURGH & GLESSNER MILL AND ELEVATOR SUPPLIES 12 TO 18 NORTH CLINTON STREET, CHICAGO, ILL. Elevating and Conveying Machinery a Specialty.			
	* * * PULLEYS. * * * SHAFTING. * * * HANGERS. * * *			
				



FOR PRICES AND DISCOUNTS
— ON —
Elevator Machinery
AND SUPPLIES
— OF —
EVERY DESCRIPTION,
EITHER STEAM OR HORSE-POWER,
The FROST MFG. CO.,
GALESBURG, ILL.

THE EXCELSIOR DUSTLESS MACHINERY

HAS NO SUPERIOR IN POINTS OF
CONSTRUCTION,
DURABILITY,
EXCELLENCE OF WORK,
STILLNESS OF RUNNING,
or LIMIT OF
POWER
REQUIRED.



"EXCELSIOR" Oat Clipper and Separator

—FOR—
CLIPPING, POLISHING, SEPARATING AND
CLEANING

OATS ONLY.

MADE IN 2 SIZES.

CAPACITIES, FROM 250 TO 600 BUSHELS PER HOUR.

DEAR SIR:

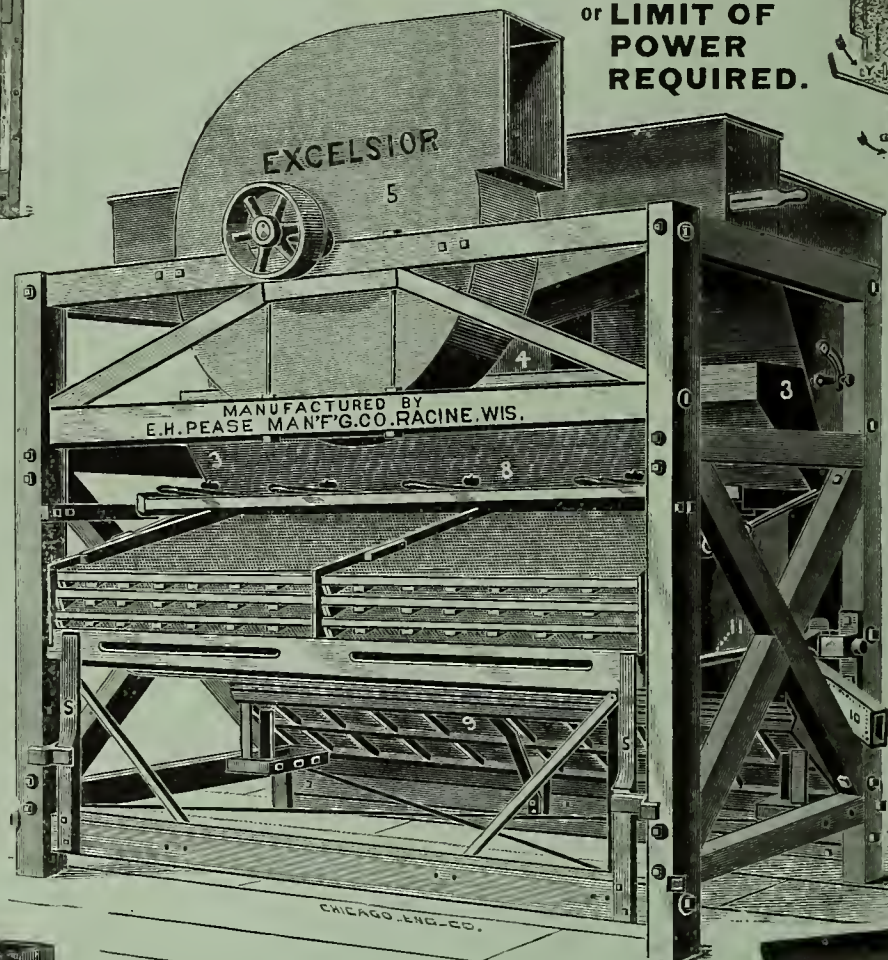
CHICAGO, ILL., Feb. 24, 1891.

The two No. 8 Excelsior Jr. Oat Clippers we bought of you in June, 1890, are giving splendid satisfaction. We experience no difficulty in raising the weight of oats from 8 to 10 lbs. to the measured bushel. On the 12th inst we run through the two machines a large lot of very foul No. 3 white oats, testing 27 lbs. to the measured bushel, and raised them to a fine bright quality of No. 2 oats, testing 37 lbs.; shrinkage 500 lbs. to 1000 bushels. The shrinkage being largely "Hulls," and being separated from the dust can be utilized in making ground feed.

On the 18th inst. we run 4 500 bushels of oats through in 3 hours, and raised them from No. 3 white, testing 29 lbs.; to No. 2, testing 38 lbs. Yours truly,

COLUMBIA ELEVATOR CO.,

J. E. CAMEY, Sec'y.



"Excelsior" Dustless Elevator Separator.

FOR ALL KINDS OF
GRAIN OR SEEDS.

MADE IN 2 SIZES.

CAPACITIES, FROM 300 TO 2,000 BUSHELS PER HOUR.

HAS LARGE SIEVE SURFACE, POWERFUL
FAN AND PERFECT VENTILATION.

GRAIN SHOE IS COUNTER-BALANCED BY
COUNTER-BALANCE SPRINGS

THE SMOOTHEST

—AND—

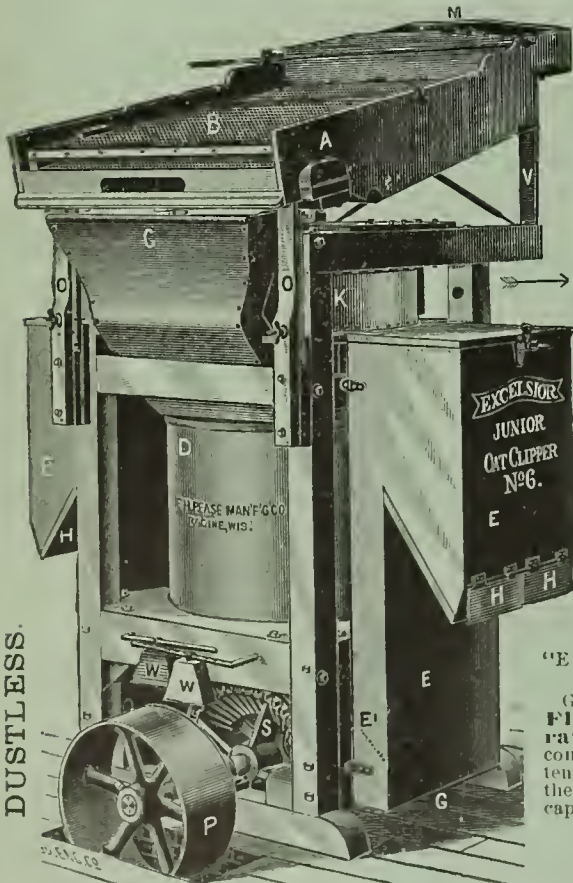
LIGHTEST RUNNING SEPARATOR
IN THE MARKET.

"ELEVATOR B."

LA CROSSE, WIS., Nov. 6, 1890.

GENTLEMEN:—Have just made a Test Run of Flax over the No. 2 Excelsior Receiver Separator of 775 bushels per hour without crowding. Of course, when flax is very dirty it would require more attention or slower feed. We are very much pleased with the machine on flax and timothy. It adds one-half to the capacity of our flax reels and of our timothy mills.

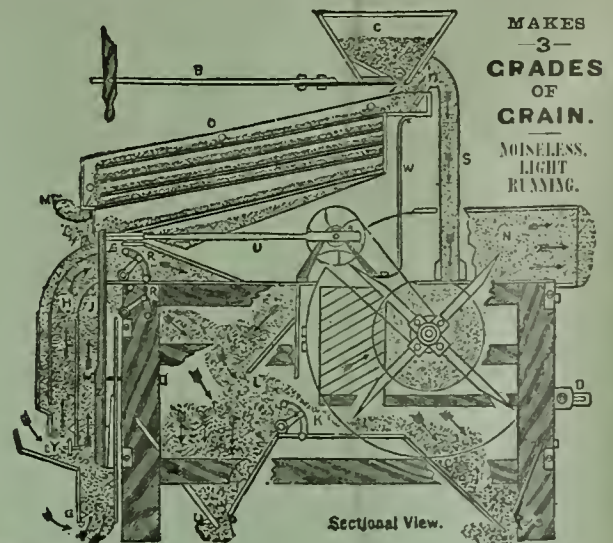
Yours respectfully, W. B. CLISBY,
Foreman for W. W. CARGILL & BRO.



"EXCELSIOR, JR." OAT CLIPPER, POLISHER and SEPARATOR
FOR CLIPPING, POLISHING, SEPARATING AND
CLEANING OATS.

OR MAY BE FURNISHED WITH SIEVING, ETC.,
FOR POLISHING, CLEANING, SEPARATING AND
GRADING WHEAT OR BARLEY.

MADE IN 2 SIZES. CAPACITIES, 250 TO 600 BUSHELS PER HOUR.



"Excelsior" Dustless Separator and Grader.

—FOR—

SEPARATING, CLEANING AND GRADING
WHEAT FOR MILLING.

OR ANY KIND OF GRAIN FOR
MERCHANTABLE PURPOSES.

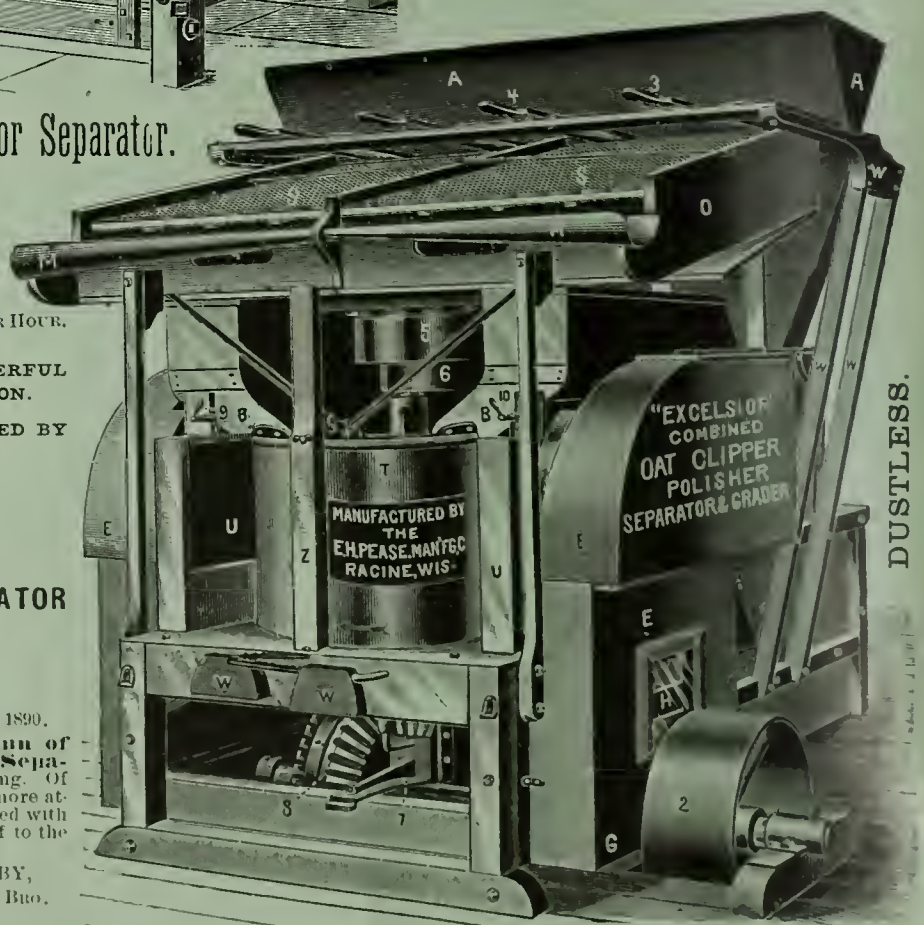
MADE IN 4 SIZES.

CAPACITIES, 150 TO 800 BUSHELS PER HOUR.

CEDAR RAPIDS, IA., Dec. 19, 1890.

GENTS:—The No. 8 EXCELSIOR OAT CLIPPER, SEPARATOR, GRADER, AND POLISHER COMBINED, bought of you in January, 1890, is still doing business at the old stand and giving as good satisfaction as ever. We are now using it to polish barley and is giving good satisfaction.

Yours truly,
MINER & MORGAN.



"EXCELSIOR" OAT CLIPPER, SEPARATOR AND GRADER COMBINED;
ALSO POLISHER, SEPARATOR AND GRADER COMBINED.

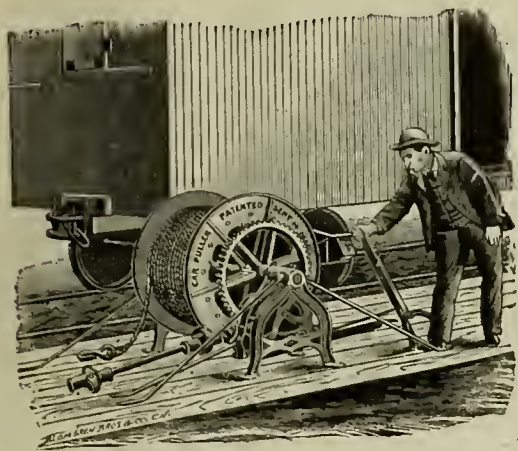
THIS "COMBINED" MACHINE May be fitted to fill any or all the capacities of a GENERAL DUST LESS ELEVATOR RECEIVING SEPARATOR for all kinds of Grain; OR AS A CLIPPER, CLEANER, POLISHER, SEPARATOR and GRADER OF OATS. OR AS A POLISHER, SEPARATOR, CLEANER and GRADER of Wheat and Barley. MADE IN 3 SIZES, WITH CAPACITIES FROM 150 TO 750 BUSHELS PER HOUR.

SEND FOR
CATALOGUE
AND
PRICES
—TO—

E. H. PEASE MFG. CO., RACINE, WIS., U. S. A.

SEE PAGES 225, 226 and 227.

POWER CAR PULLERS

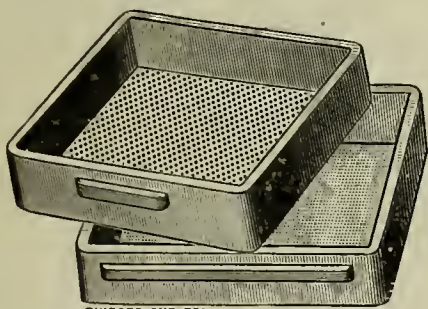


THE W. G. ADAMS POWER CAR PULLER.

COMPACT, STRONG, CHEAP.

Can be set at any angle with Driving Shaft or Rail Road Track.

HANDLES From 1 to 3 loaded cars at once, according to the conditions of the track.



GRAIN AND SEED TESTER.

The upper box fits into the lower one. The zincs or wire cloth, as the case may be, are of different perforations, or meshes, according to the work required to do. When ordering, simply state what the Testers are to be used for, whether for grain or for fine seeds, and what kind, as separate Testers are required for each. A Tester includes a pair (both sieves).

FOR HANDLING CARS

—AT—

FACTORIES,
COAL MINES,
WAREHOUSES,

GRAIN ELEVATORS,
MILLS,
MALT HOUSES,
BREWERIES

—AND—

DISTILLERIES,

Or wherever necessary to move cars without a Switch Engine. Can be set at any angle with Railroad Track.

We are Makers and Jobbers of all kinds of

MACHINERY and SUPPLIES

—FOR—

GRAIN ELEVATORS and MILLS

SUCH AS

SHAFTING, PULLEYS, HANGERS,
PILLOW-BLOCKS, CLUTCHES, COUPLINGS,
GEARS, SPROCKETS, SET COLLARS,
TAKE-UP BOXES, CRANE-SPOUTS,
LEATHER, RUBBER, COTTON and LINK BELTING,
"FLEXIBLE" and "SWIVEL" GRAIN SPOUTS,
ELEVATOR BOOTS, BUCKETS and BOLTS,
"SPIRAL" and "BELT" CONVEYORS,
"PLATFORM," "DUMP" and "HOPPER" SCALES,
GRAIN SCOOPS, and POWER GRAIN SHOVELS,

—ALL SIZES OF—

Farm and Warehouse Fanning Mills,

GRAIN TESTERS, SEED TESTERS,
PERFORATED METALS, WIRE CLOTH,

Power Car Pullers, Oat Clippers, Dustless Receiving Separators,

POLISHERS, SEPARATORS, GRADERS,
FLAX REELS and SPECIAL FLAX MILLS,
"OVERHEAD," "SWEEP" and "TREAD" HORSE POWERS,
BAG-TRUCKS, SIX-WHEEL WAREHOUSE TRUCKS.

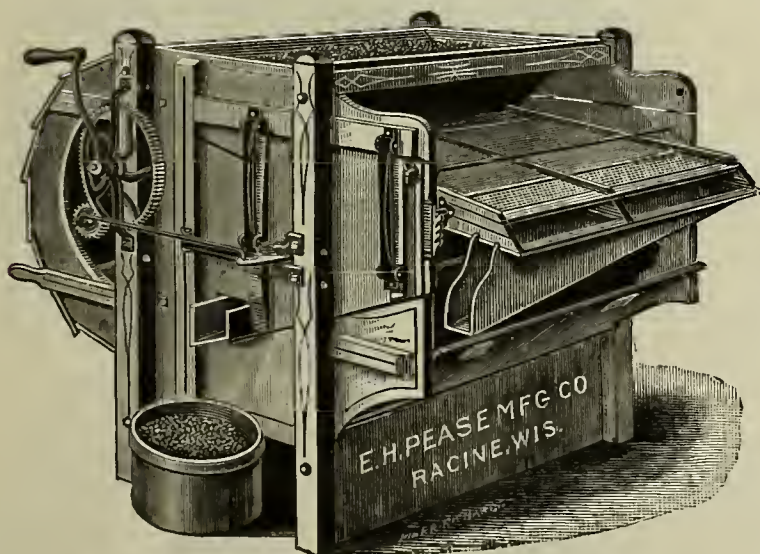
—AND—



"HERCULES" POWER CAR PULLER.
FOR HEAVY WORK. IN USE BY

Columbia El. Co. Chicago—1 machine.
Wright & Hill, Linseed Oil Works. Chicago—1 machine.
J. A. McLennan, (El. Contr. & Builder), Chicago—11 machines.
W. L. Luce's Elevator. So. Elmhurst, Ill.—1 machine.
H. Mueller & Co. Chicago—1 machine.
Soo Ry Co.'s El. Gladstone, Mich.—1 machine.
P. & W. Ry Co.'s El. Painesville, Ohio—2 machines.
A. T. & S. F. Ry Co.'s El. Kansas City, Mo.—2 machines.
Barnett & Record, Minneapolis, Minn.—10 machines.
El. Contrs & Builders }
Watrous Engine Works. Winnipeg, Man.—1 machine.
C. A. Pillsbury & Co. Minneapolis, Minn.—1 machine.
Interior El. Co. Minneapolis, Minn.—2 machines.
City El. Co. Minneapolis, Minn.—1 machine.
St. Anthony El. Co. Minneapolis, Minn.—2 machines.
S. S. Cargill's El. Minneapolis, Minn.—1 machine.
D. A. Martin's El. Minneapolis, Minn.—1 machine.
Millington W. Sand Co. Millington, Ill.—1 machine.
Hogan & Neilson. Seneca, Ill.—1 machine.
—AND MANY OTHERS.

SPECIAL FLAX CLEANING MACHINERY.



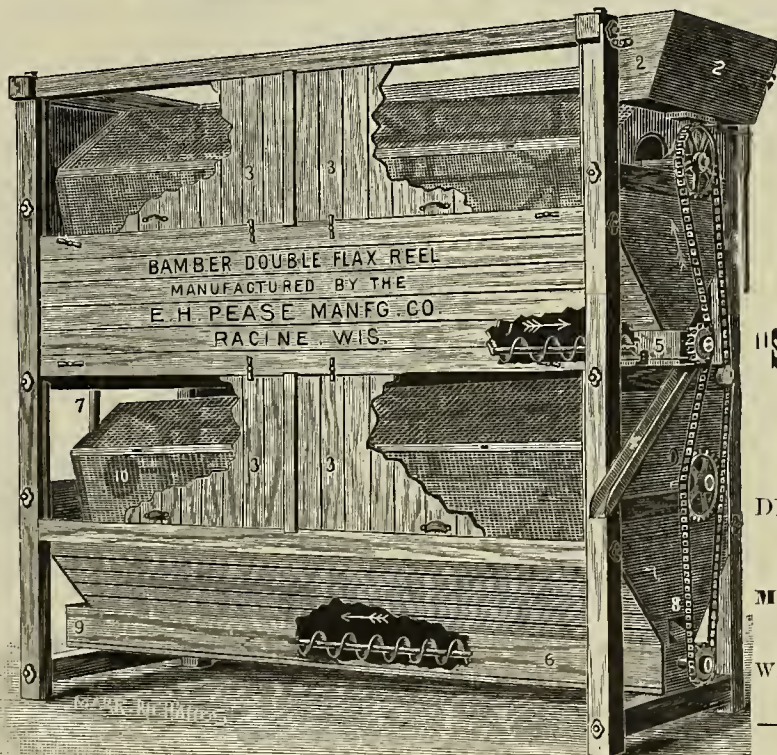
THE "PEASE" SPECIAL FLAX MILL.
FOR HAND USE OR POWER.

This Mill is represented with a Grain Hurdle in the Shoe, to show that although especially adapted to Flax-Seed Cleaning, it can also be used for all kinds of Grain, making it a universal mill, calculated for all kinds of work. This mill is built upon the same principle as our Side Shake Warehouse Mills, but with more depth of the shoe, in order to accommodate deeper Sieves and a flax screen extending to the extreme front of the mill, a length of four feet. It consequently has greater capacity than any ordinary mill in existence. No flax hurdles are used, as separate sieves work better on flaxseed, and afford opportunities for changing the combinations for different classes of work. This mill is equally well adapted to cleaning, separating and screening Timothy, Clover, and other fine seeds.

NOTE—The No. 0 and No. 00 machines are not fitted to run by hand power.

	No. 2.	No. 1.	No. 0.	No. 00.
Extreme Height.	3 ft. 8 in.	3 ft. 8 in.	3 ft. 8 in.	3 ft. 8 in.
Size over all....	5 ft. 7 in. x 4 ft.	5 ft. 7 in. x 4 ft.	5 ft. 7 in. x 5 ft.	5 ft. 7 in. x 6 ft.
Fl to cen. of pulley	27 in.	27 in.	27 in.	27 in.
Driving pulleys..	6 in. x 2 in.	6 in. x 2 in.	6 in. x 3 in.	6 in. x 3 in.
Rev. per minute.	275	275	275	275
Size of Sieves...	3 ft. 2 in. x 33 in.	4 ft. x 33 in.	5 ft. x 33 in.	6 ft. x 33 in.
Depth of Screw.	4 ft.	4 ft.	4 ft.	4 ft.
Capacity per h'r.	25 to 35 bu.	35 to 45 bu.	45 to 60 bu.	60 to 75 bu.

STRAIGHT OR TAPERED
HAND REELS OF ANY DIMENSIONS
DESIRED, MADE TO ORDER.



Two feet of capacity length for each lineal foot of machine.
Tapered, Hexagon Reels, Revolving on Horizontal Shafts.

ALL SPROCKET WHEELS AND DRIVE CHAIN RUN.

Perpendicular and Parallel with each other.

The lightest running, best made, most durable reels in the market.

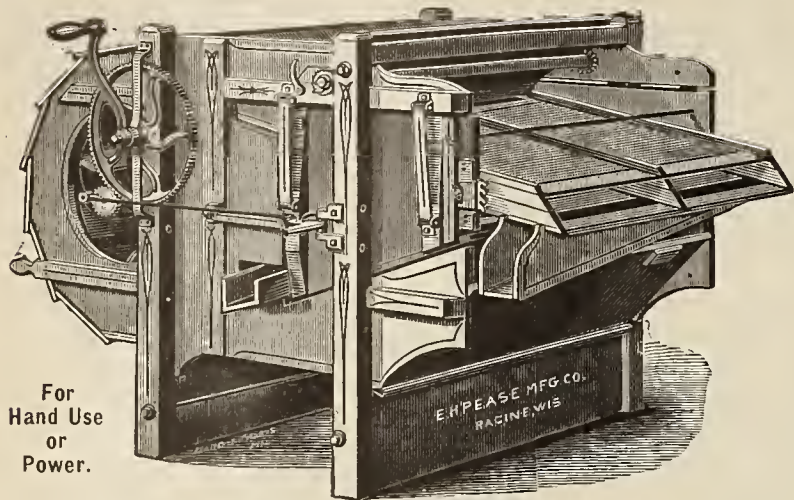
—MACHINES RECENTLY SOLD TO—

The Albert Dickinson Seed Co. Chicago.
W. C. Luce. So. Elmhurst, Ill. (4 machines.)
Cargill Bros. La Crosse, Wis.
Inter-State Grain Co. Oelwein, Ia.
McMichael & Son. McGregor, Ia.
J. C. Sanborn & Son. Ortonville, Minn.
Boor & Benjamin. Ashton, Ia.
Clark Bros. Manson, Ia.
D. C. Fairbanks. Dodge Center, Minn.
Clausen Bros. Cedar Lake, Ia.
—AND MANY OTHERS.

E. H. PEASE MFG. CO., RACINE, WIS., U. S. A.

SEE PAGES 226, 227 AND SECOND COVER PAGE.

PEASE WAREHOUSE FANNING MILLS.



For
Hand Use
or
Power.

The "Pease" Side Shake Mills.

The Cut shows the "Right," or Crank side. On the opposite side are tight and loose Pulleys. These mills are not only a first-class mill for general work but are also specially adapted for all kinds of seed cleaning as is attested by the following unsolicited letter, which we publish by permission:

ST. CHARLES, MINN., April 12, 1890.

E. H. PEASE MFG. CO., Racine, Wis.:

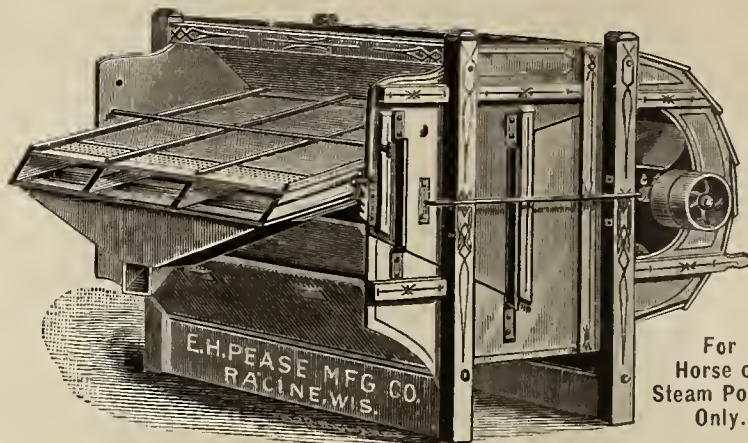
Gentlemen:—We have started the No. 2 Mill which we bought from you a short time ago. We find it to be the best Timothy Cleaner we ever saw. It cleans very fast and does fine work. It is far ahead of the — mill for cleaning timothy. We also use a — mill but it does not come up with the No. 2 side shake we bought of you. Your No. 2 will clean timothy about three times as fast as the — mill does and does better work than the — does. Your mill is well built and strong. We would not give our No. 2 "Pease" Side Shake for any two — that we ever saw.

Very truly,
J. B. ZECHES & CO.

NOTE—The No. 0 machine is not fitted to run by hand power.

	No. 3.	No. 2.	No. 1.	No. 0.
Extreme Height.....	3 ft. 6 in.	3 ft. 6 in.	3 ft. 6 in.	3 ft. 6 in.
Size over all.....	5 ft. 2 in. x 3 ft. 4 in.	5 ft. 2 in. x 4 ft.	5 ft. 2 in. x 4 ft. 9 in.	5 ft. 2 in. x 5 ft. 9 in.
Floor to center of pulley..	25½ in.	25½ in.	25½ in.	25½ in.
Driving pulley.....	6 in. x 2 in.	6 in. x 2 in.	6 in. x 2 in.	6 in. x 3 in.
Revolutions per minute.....	275	275	275	275
Size of hurdles.....	2 ft. 6 in. x 24 in.	3 ft. 2 in. x 24 in.	4 ft. x 24 in.	5 ft. x 24 in.
Capacity per hour.....	100 to 200 bu.	125 to 200 bu.	175 to 350 bu.	250 to 450 bu.

HAVE
THE
LARGEST
SALES
OF
ANY
MADE
IN
THE
UNITED
STATES



For
Horse or
Steam Power
Only.

The "Pease" End Shake Mills.

Particularly adapted for use in Horse Power Elevators where power is limited and close cleaning and grading desired. It is strong, durable and noiseless.

The shoe is supported by STEEL springs, hung from above and vibrated by flexible shake-rods with ADJUSTABLE ECCENTRICS. The shake is from front to back, instead of from side to side.

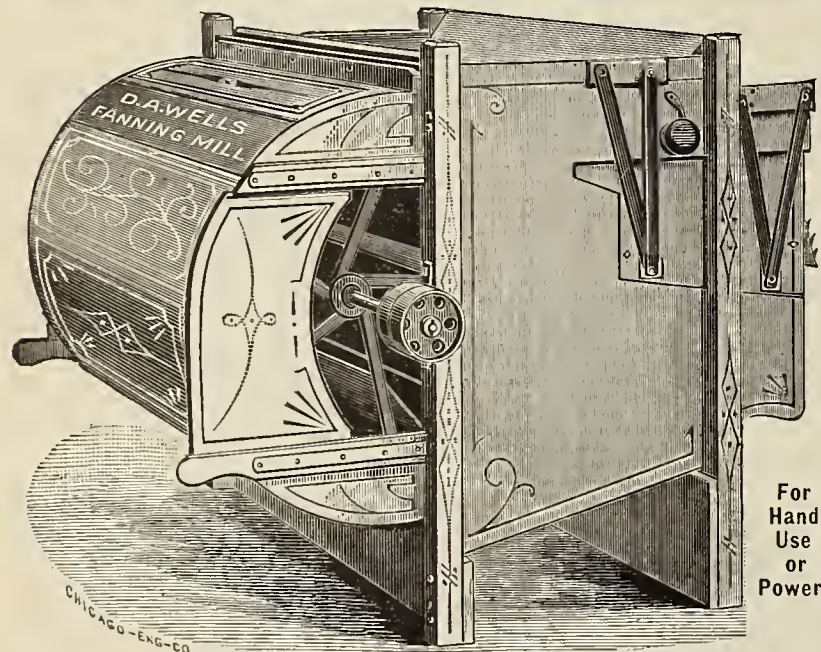
They are fitted with a patent adjustable hopper raiser, not shown in cut, which gives an even flow of grain upon the sieves.

These Mills have MUCH GREATER CAPACITY than any other kind of equal sizes. They are especially adapted for cleaning ALL KINDS OF GRAIN. The side shake Mills are better adapted for cleaning Clover, Timothy, Flax, etc.

NOTE—The pulleys are placed on the RIGHT side of mills or opposite to those showing in this cut, unless otherwise ordered.

	No. 3.	No. 2.	No. 1.	No. 0.	No. 00.
Extreme Height.....	3 ft. 6 in.	3 ft. 6 in.	3 ft. 6 in.	3 ft. 6 in.	3 ft. 6 in.
Size over all.....	5 ft. 9 in. x 3 ft. 4 in.	5 ft. 9 in. x 4 ft.	5 ft. 9 in. x 4 ft. 9 in.	5 ft. 9 in. x 5 ft. 9 in.	5 ft. 9 in. x 5 ft. 9 in.
Floor to center of pulley..	25½ in.	25½ in.	25½ in.	25½ in.	25½ in.
Driving pulleys.....	6 in. x 2 in.	6 in. x 2 in.	6 in. x 2 in.	6 in. x 2 in.	6 in. x 3 in.
Revolutions per minute.....	450	450	450	450	450
Size of hurdle.....	2 ft. 6 in. x 24 in.	3 ft. 2 in. x 24 in.	4 ft. x 24 in.	5 ft. x 24 in.	6 ft. x 24 in.
Capacity per hour.....	125 to 250 bu.	150 to 300 bu.	200 to 400 bu.	250 to 500 bu.	300 to 600 bu.

THESE MACHINES CAN BE FURNISHED WITH SPECIAL SIEVING TO HANDLE ANY KIND OF GRAIN OR SEEDS.



For
Hand Use
or
Power.

The "D. A. Wells" Warehouse Fanning Mill.

Designed for locations where power is limited and rapid cleaning is more of an object than close grading.

They have a much larger capacity than our "Pease" Warehouse Mills, but having a larger fan, do not require as high a motion and consequently require less power.

These mills are famous as corn and oat cleaners, where plain elevator work is required, and to be done rapidly.

The sieves are so arranged that they may be put in place or taken out independently, thus enabling the operator to quickly arrange any combination that may be required for the various kinds or conditions of grain to be cleaned.

Extreme height.	Size over all.	Floor to center of pulley.	Driving pulleys.	Rev. per minute.	Size of sieves.	Capacity per hour on corn or oats.	Weight.
4 ft. 1 in.	5 ft. 6 in. x 2 ft. 3 in.	6 ft.	6 in. x 2 in.	140	57 in. x 26 in.	800 to 1,000 bu.	425 lbs.

Office of
WM. DEACON.

GRAIN AND SEEDS,
SANDWICH, ILL., May 23, 1890.

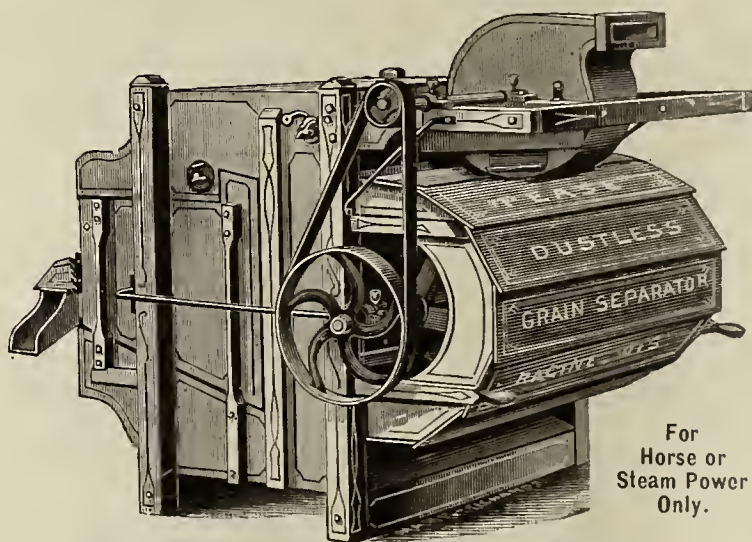
E. H. PEASE MFG. CO., Racine, Wis.:

Gentlemen:—Replying to yours of recent date, in which you inquire whether my old "D. W. Wells" Fanning Mill is not about worn out and if I will not require another one this season, would say:—The small piece of casting I ordered from you a few days ago to repair same, has put my mill in perfect order, with no reason in sight why it will not be running at the end of time and doing perfect work. This machine was in the Elevator when I took possession THREE years ago, and I am reliably informed has been in almost constant use here for FIFTEEN years previous to that time.

Very truly yours,
WM. DEACON.

WE
ARE
HEADQUARTERS
FOR
ALL KINDS
OF
MOTIVE POWER
MACHINERY,
FITTINGS,
SUPPLIES AND
REPAIRS
FOR
GRAIN
ELEVATORS
AND
MILLS.

—o—
SEND FOR
GENERAL
CATALOGUE
AND PRICES
—TO—



For
Horse or
Steam Power
Only.

The "Pease" Dustless Separators.

This Separator commends itself above all others for the following reasons:

- 1st. It is very strong and guaranteed to be durable.
- 2d. There is no gearing about it to wear out.
- 3d. It is noiseless.
- 4th. Is not complicated.
- 5th. Has no equal in separating oats from wheat and barley, and for general cleaning and Screening of all kinds of grain.
- 6th. The cost is very much less than that of other Separators of equal capacity.

	No. 3.	No. 2.	No. 1.	No. 0.	No. 00.
Extreme height.....	5 ft. 2 in.	5 ft. 2 in.	5 ft. 2 in.	5 ft. 3 in.	5 ft. 3 in.
Size over all.....	5 ft. 9 in. x 3 ft. 4 in.	5 ft. 9 in. x 4 ft.	5 ft. 9 in. x 4 ft. 9 in.	5 ft. 9 in. x 5 ft. 9 in.	5 ft. 9 in. x 5 ft. 9 in.
Height to where grain enters.....	10 in.	6 in.	3 in.	3 in.	3 in.
Floor to center of pulley..	4 ft. 3 in.	4 ft. 3 in.	4 ft. 3 in.	4 ft. 3 in.	4 ft. 3 in.
Driving pulleys.....	6 in. x 3 in.	6 in. x 3 in.	6 in. x 3 in.	6 in. x 3 in.	6 in. x 4 in.
Rev. per minute.....	450	450	450	450	450
Size of hurdles.....	2 ft. 6 in. x 3 ft. 2 in.	3 ft. x 3 in.	4 ft. x 30 in.	5 ft. x 30 in.	6 ft. x 30 in.
Capacity per hour.....	125 to 250 bu.	150 to 300 bu.	200 to 400 bu.	250 to 400 bu.	300 to 600 bu.

E. H. PEASE MFG. CO., RACINE, WIS., U.S.A.

SEE PAGES 225, 227 AND SECOND COVER PAGE.

WE ARE HEADQUARTERS

For ALL kinds of MACHINERY AND SUPPLIES

—FOR—

Grain Elevators and Mills,

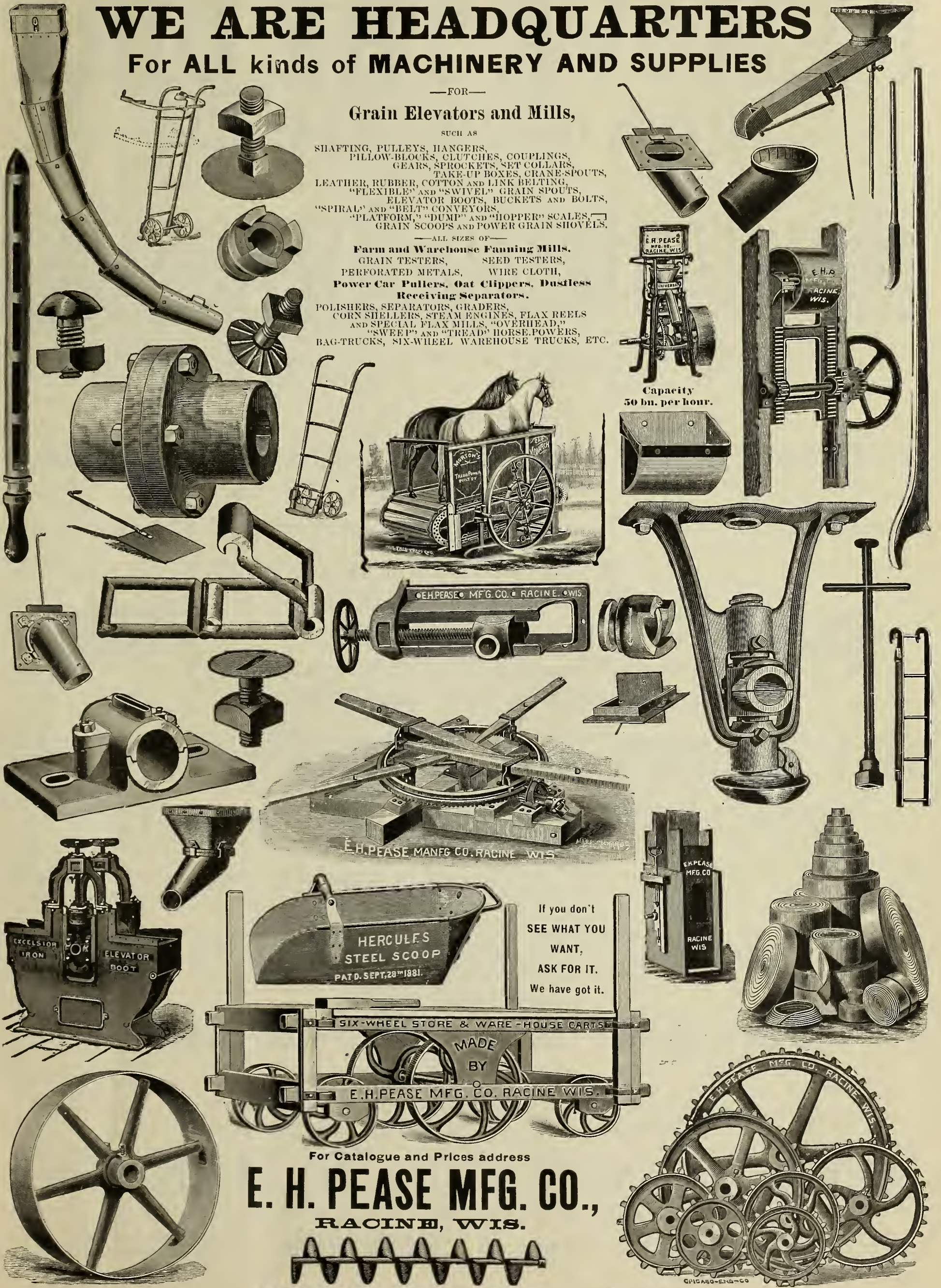
SUCH AS

SHAFTING, PULLEYS, HANGERS,
PILLOW-BLOCKS, CLUTCHES, COUPLINGS,
GEARS, SPROCKETS, SET COLLARS,
TAKE-UP BOXES, CRANE-SPOUTS,
LEATHER, RUBBER, COTTON AND LINK BELTING,
"FLEXIBLE" AND "SWIVEL" GRAIN SPOUTS,
ELEVATOR BOOTS, BUCKETS AND BOLTS,
"SPIRAL" AND "BELT" CONVEYORS,
"PLATFORM," "DUMP" AND "HOPPER" SCALES,
GRAIN SCOOPS AND POWER GRAIN SHOVELS.

—ALL SIZES OF—

Farm and Warehouse Fanning Mills,
GRAIN TESTERS, SEED TESTERS,
PERFORATED METALS, WIRE CLOTH,
Power Car Pullers, Oat Clippers, Dustless
Receiving Separators.

POLISHERS, SEPARATORS, GRADERS,
CORN SHELLERS, STEAM ENGINES, FLAX REELS
AND SPECIAL FLAX MILLS, "OVERHEAD,"
"SWEEP" AND "TREAD" HORSE-POWERS,
BAG-TRUCKS, SIX-WHEEL WAREHOUSE TRUCKS, ETC.



E.H. PEASE MFG CO. RACINE WIS

HERCULES
STEEL SCOOP

PAT. D. SEPT. 28TH 1881.

If you don't
SEE WHAT YOU
WANT,
ASK FOR IT.
We have got it.

SIX-WHEEL STORE & WARE-HOUSE CARTS

MADE
BY

E.H. PEASE MFG. CO. RACINE WIS.

For Catalogue and Prices address

E. H. PEASE MFG. CO.,
RACINE, WIS.



SEE PAGES 225, 226 AND SECOND COVER PAGE.

REMOVE THE DIRT

AND RAISE THE GRADE OF YOUR GRAIN.

MONITOR GRAIN SEPARATORS

The superiority of these machines over all others is best demonstrated by the evidence of those who are using them.

THE LEADING ELEVATORS BUILT LAST YEAR WERE EQUIPPED WITH THESE MACHINES.

By investigating the "MONITOR" you will find that we lead in the following essential features:



- 1st. Ease, and accessibility to all parts.
- 2d. Light running.—Perfectly steady.
- 3d. Even distribution of grain.
- 4th. Powerful, but perfectly controlled air currents.
- 5th. Workmanship superior. Material the best.



BUILT ON HONOR.

OFFERED WITHOUT FEAR.

SHIPPED UNDER THE STRONGEST GUARANTEES.

Taken all in all we offer you the SIMPLEST and BEST Grain Separator ever offered.

BARLEY

Our line of Barley Cleaners is very complete, and it will pay every Barley Shipper to investigate.

CLEANERS FOR ALL KINDS OF GRAIN.

A complete line of these machines can be seen and full information obtained at our
Western Branch, 63-65 South Canal Street, Chicago, Ill.

Write for Circular, Prices, Etc.

HUNTLEY, CRANSON & HAMMOND

SILVER CREEK, N. Y., U. S. A.

B. F. RYER, { 63-65 SOUTH CANAL ST., } Chicago, Ill. HENRY SIMON, { 20 Mount Street, MANCHESTER, ENG.,
Manager Western Branch. GENERAL AGENT FOR EUROPE.



A MONTHLY JOURNAL DEVOTED TO THE ELEVATOR AND GRAIN INTERESTS.

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SOME GRAIN LEGISLATION.

A political convention may be a very good place "to born" the various economic schemes with which demagogues are in labor, says the *St. Paul Dispatch*, but it is a poor place for honest but misled people to dictate legislation on matters of which they have little or no knowledge. Our Minnesota legislature, like the legislatures that have, unfortunately for their state and for the nation, been elected in many parts of the country, is composed largely of men who feel their grievances so strongly that they are ready to try almost anything that anybody name as a remedy, without studying calmly and intelligently to see whether it would indeed be a remedy, or, in fact, an aggravation, for their troubles. They have come to their duties prepared to vote for any measure called for in their party platform, though a very little inquiry and consideration would show them that some of those measures could only harm the particular class they represent as well as other classes.

There is the bill that has been introduced to make it unlawful for a grain buyer to sell his grain, except in actual delivery. As it is, when he has completed a day's buying he can sell it in Minneapolis or Duluth by telegraph at the prices existing that day, and deliver it afterwards. That makes it safe for him to buy. If he must hold it till he can get it to market, he must risk a fall in price that would ruin him. If the price should go up he would be the gainer. But he can't afford to take any risks. He can't buy at all if he must do it as a speculator unless he has very large capital. In case the bill becomes law he must go out of business or be a "wheat gambler." It is not to the interest of the farmer to have him go out of business, and the farmers say they don't want him to be a gambler.

Whether the "option" business as conducted at the great grain-buying centers is bad and should be prohibited is another question. This bill has, and could have, nothing to do with such prohibition. Its enforcement can only be local and certainly would be injurious. The only means the local buyer could resort to for safety would be allowing himself a large enough margin to insure him against a fall in prices. And of course the increase in margin would have to come out of the farmers. But the fact has gone forth that all option methods must

be abolished; for such abolishment has got a place among the "reforms."

RULES FOR RECEIVING GRAIN.

The Illinois Central has adopted the following rules with reference to grain received in Chicago:

"Grain consigned to points east of Chicago, care of a railroad company or a fast freight line for delivery to such company or fast freight line upon arrival at Chicago, will be delivered to connecting lines free of switching.

"Grain reaching Chicago consigned to 'order of' or

THE KAUCHER SYSTEM OF ELEVATORS.

The cut given herewith shows different sizes of the Frank Kaucher system of grain elevators. Any intermediate size may be taken from the plans of these elevators by slight deviations therefrom. The office of this mill and grain elevator architect is room 410 German American Bank building, St. Joseph, Mo. Mr. Kaucher builds complete elevators of any capacity under one contract, and during the last four years he has built and equipped forty-two elevators in Missouri, Kansas and Nebraska.

Mr. Kaucher was born and raised in Ohio. He has followed the trade of a millwright from early boyhood, and although still a young man, he has gained practical experience rarely possessed by men in this line. His earliest work was done in 1885, at which time the turbine water wheel was in its infancy, so he can converse about how things in his line were done in early days, and of his first work on an overshot water wheel, making the old style trundlebed wooden gearing.

The past eighteen years Mr. Kaucher has been engaged constantly at mill and elevator work. He located at St. Joseph seven years ago, and started into business on his own responsibility. By his mechanical ingenuity and untiring energy he has built up a good business. He is acknowledged by men of ability to be one of the best organizers of labor to be found. No man in his employ is ever idle, but each one is always busy doing his work in the easiest, most economical and mechanical way possible.

Mr. Kaucher is not an amateur rushing into notice for the mere sake of securing

business; but has some of the most accurate and neatest detail drawing of his own design and execution in his office to be found in his line. His list of customers, which can be had upon application to him, includes some of the most prominent firms in the country. His reputation as a contractor is worthy of consideration by all who desire the services of one in his line.

There is a variety of hard wheat that is grown in Kansas that finds little favor with the St. Louis millers, but in order to get it out of their hands the Kansas shippers mix it with the better variety and unload it on the St. Louis millers. The latter have taken action to get relief through their grain committee and the inspector.



THE KAUCHER SYSTEM OF ELEVATORS.

"notify" a firm at Chicago will be subject to a switching charge of \$2 a car unless ordered to a connecting line within twenty-four hours after 2 p. m. of the day of arrival, provided that inspection of the grain is made before 10 a. m. of that day. If inspection is made after 10 a. m. the \$2 per car switching charge will accrue twenty-four hours after 2 p. m. the following day."

The notice of Feb. 7 is cancelled.

It is estimated that only about one-tenth of the corn raised in Iowa leaves the state. The other nine-tenths is fed to Iowa hogs and cattle. The Iowa farmer has quit raising corn to sell.

AN ENTERPRISING GRAIN FIRM.

One of the most successful, the most extensive grain businesses ever conducted in this or any other country by one firm is undoubtedly now carried on by F. H. Peavey & Co. of Minneapolis, Minn. Their operations extend to all of the Western and Northwestern states and to some parts of the East.

They own and operate six large terminal elevators, two of half a million bushels' capacity, one of a million and a half bushels', and three of a million bushels' capacity each. They also own and control about 200 country elevators and warehouses with an average capacity of 25,000 bushels each. These houses are scattered through Washington, Oregon, Idaho, Nebraska, Kansas, Iowa, South Dakota, Minnesota, Illinois and Missouri. The company employs between 450 and 500 men. In addition to the elevators owned and operated by the firm it co-operates with a large number of independent buyers, furnishing them the money and handling their purchases.

Among the enterprises in which the firm is interested is the Pacific Coast Elevator Company, with headquarters at Portland. Of this company F. H. Peavey is president, and Mr. E. C. Michener, who has an interest in the company, is resident manager. The line of houses operated by the Peavey Elevator Company at all points on the Chicago, Minneapolis & Omaha Railroad is owned exclusively by F. H. Peavey & Co. They have leased, for a term of years, the property of the Central Elevator Company, which consists of a number of houses on the Minneapolis & St. Louis Railroad.

Last year the firm bought out the Omaha Union Elevator Company and the Himebaugh & Merriam interests, which includes a large elevator at Omaha and houses along the line of the Union Pacific road. These houses are operated under the name of the Omaha Elevator Company, but F. H. Peavey & Co. have a controlling interest in the company, and Frank H. Peavey is president of the company. Mr. A. B. Jaquith, one of Peavey & Co.'s old employees, is manager of the company.

The firm will soon own three elevators at Kansas City. Last year they erected the Union Pacific Elevator with a capacity of 1,000,000 bushels, and now they have arranged to buy the new 500,000-bushel elevator on the Santa Fe track in that city. The property of the Midland Elevator Company is owned exclusively by F. H. Peavey & Co., and Charles T. Peavey is president and residing manager.

The Interior Elevator Company of Minneapolis, which controls two large terminal elevators—one of 1,250,000 bushels' and the other of 250,000 bushels' capacity—is also owned exclusively by F. H. Peavey & Co.

Mr. Frank H. Peavey is also one of the largest (if not the largest) stockholders in the Duluth Elevator Company, which has terminal elevators with a capacity of 5,000,000 bushels. To its already long list of successful enterprises the firm is now adding another in a new field. At Richford, Vt., it is building a 500,000 bushel elevator to handle the firm's business in the New England states.

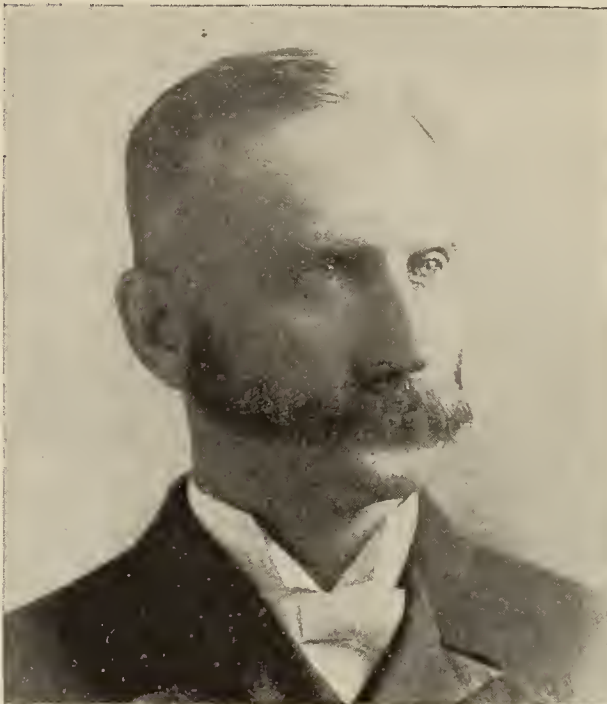
Heretofore the houses controlled by the firm have handled in the aggregate about 25,000,000 bushels of grain per annum. As many new elevators have lately been acquired the firm will, during a good crop year, easily handle 50,000,000 bushels of grain.

The firm never speculates, but simply does a regular grain business, buying from first hands and shipping to the best market obtainable. Their excellent facilities for handling, together with the large amount of grain handled, enables them to handle grain on a very small margin.

The firm, as it now stands, is composed of Frank H. Peavey and his brother, Charles T. Peavey, who was admitted to a partnership in 1885, when the entire office force and the headquarters of the concern were removed from Sioux City to Minneapolis. The business was started and built up by Frank H. Peavey, of whom we herewith give a cut. The success of the many enterprises and the rapid growth of the firm's business is due almost entirely to the untiring energy and great ability of its founder. Mr. Frank H. Peavey was born in Eastport,

Me., in January, 1850. Such schooling as he received was in the public schools at that place. His father died in 1859, leaving a widow and three children, of which Frank was the oldest. Frank was a plucky boy, and in 1864, when he was 14 years old, he started out to do for himself. He settled in Chicago. There he secured a position as messenger boy in one of the prominent banks. He was in the employ of the bank three years and when he left it he was serving as bookkeeper. He went to Sioux City in 1867, which was then 100 miles from a railroad, and became the bookkeeper for H. D. Booge & Co., a leading house at that time. He remained with this firm until 1870, when the firm of Booge, Smith & Peavey was organized to engage in the sale of agricultural implements. The following year the property of the house was destroyed by fire, and everything that Mr. Peavey had accumulated was lost. Indeed, in the settlement he gave his note to James E. Booge for \$2,000, the proportion of the loss falling to him, which he was unable to meet, leaving him at that date by that amount so much poorer than one without a dollar. The business was reorganized in the fall of that year under the name of Evans & Peavey.

In 1872 he married Miss Mary G. Wright, daughter of Hon. Geo. G. Wright of Des Moines. In 1873 Mr.



FRANK H. PEAVEY.

Peavey bought the interest of his partner in the implement business, and in a small way began handling grain, the object being to collect debts for machinery. A small warehouse stood on the river front in Sioux City for many years bearing the name "Frank H. Peavey." In 1875, following the completion of the Dakota Southern Railroad from Sioux City to Yankton, he commenced buying wheat along that line for the Minneapolis Millers' Association and continued during the life of that organization, his business growing so that when the organization dissolved he was buying grain at most of the stations on the Chicago, St. Paul, Minneapolis & Omaha Railway. In 1877 the implement business passed into the hands of Peavey Bros., J. F. Peavey, a younger brother, having been admitted to a partnership. In 1881 the firm went into wholesale hardware. Meanwhile the grain business of F. H. Peavey & Co. had so increased that Mr. Peavey came to devote his entire time to it. In 1882 he opened an office in Minneapolis with E. C. Michener in charge, and in 1885 Mr. Peavey removed from Sioux City to Minneapolis, which has been the headquarters of F. H. Peavey & Co. since. Mr. Michener became a partner and remained so until August, 1890.

The development of the business has been remarkable, and it is said that the firm at this time controls a larger number of elevators than any other firm in the world. Mr. Peavey still retains large business interests in Sioux City. He was among the organizers of the Security

National Bank, and up to the time of his removal from the city was its president. In connection with his brother he controls the Sioux City Street Car Company. Mr. Peavey has widely diverse business interests, and is recognized as one of the most influential as well as one of the most capable business men of the West.

Personally he is one of the most approachable and companionable of men. He is of most cheery disposition, and believes in recreation as a necessary equipment for hard work. Of course he is methodical and painstaking in all he does. He has a strong grasp upon a situation, and quick and accurate judgment.

WHY GRAIN GOES BY RAIL.

Captain M. De Puy, president of the Canal and Harbor Protective Union of the state of New York, in a recent letter to the *Commercial Bulletin* says: Recently I spent three weeks in Chicago, and during that time I was a privileged character on the floor of the Board of Trade, through the courtesy of Messrs. Keith & Carr, vessel agents, and, while roaming around the hall I discovered the cause of the decline in memberships in the New York Produce Exchange from \$5,000 to \$700.

On the floor of the Chicago Board of Trade is a large bulletin board where all grain and provisions billed direct to foreign ports are posted.

By this railroad and steamship combination scheme all commission dealers in Buffalo and New York are barred from getting a penny in the transaction, although the goods may pass under their eyes. In the language of Boss Tweed, what are we going to do about it? To most people the transaction appears to be all straight and legitimate, but when we investigate under the surface we find that the railroad companies have actually prevented the grain being shipped to New York by the Erie Canal, by their (the railroads) owning and controlling the grain elevators at Buffalo and New York. In other words, by controlling the terminal facilities of the people's free waterways.

If grain is shipped by canal, the aggregate charges for transferring the grain at both ports are \$28.75 per 1,000 bushels, while if shipped by an all-rail route to the seaboard it can be transferred from cars to ships at a cost of \$2.75 per 1,000. In fact, in 1886 the Pennsylvania Railroad Company was detected in transferring grain to ships in Jersey City *absolutely free*.

This scheme of the railroads to prevent grain being held for the water route is not only disastrous to commission dealers in New York, but means death to the Erie boatmen, and operates seriously against the millers in the state of New York. In conclusion, permit me to add that the only salvation for the grain commission dealers,

Erie boatmen and merchant millers lies in state control of a few grain elevators at Buffalo and New York.

The late Senator Low said, in a speech at Albany, that \$250,000 expended by the state in grain elevators at Buffalo and New York would do more to aid the Erie boatmen than \$20,000,000 would expended on canal improvements.

WHEAT SHIPMENTS FROM AMERICA, RUSSIA AND INDIA.

The monthly exports of wheat, flour included, from the United States in 1890 compare with exports from Russia and India as follows, compiled by the Cincinnati *Price Current*, with totals for previous years, in bushels:

Bushels.	U. States.	Russia.	India.
1890.....	100,209,000	95,021,000	25,616,000
1889.....	93,000,000	95,000,000	27,000,000
1888.....	98,000,000	106,000,000	30,500,000
1887.....	150,000,000	78,500,000	28,500,000
1886.....	131,000,000	50,000,000	44,000,000
1885.....	133,000,000	92,000,000	39,500,000
1884.....	124,000,000	68,000,000	29,500,000
1883.....	113,000,000	84,000,000	39,000,000
1882.....	144,000,000	76,000,000	26,500,000
1881.....	151,000,000	49,000,000	37,000,000
1880.....	175,000,000	37,000,000	14,000,000

Compare opinions with your brother dealers in the columns of the AMERICAN ELEVATOR AND GRAIN TRADE.

NO FAITH IN THE PLUNGER.

One day last fall when the wheat was being rapidly shipped into Duluth, the chief wheat inspector found three strangers, all Scandinavians, prowling about the yards and watching the wheat as it came in and was undergoing inspection. They did not appear to quite understand how to proceed with their business, for they were not there for nothing. Finally they approached Mr. Fulton and asked him how the wheat was graded. The inspector explained the process, saying that by means of the plunger he found out the quality. They inquired whether he weighed every car before fixing the grade, to which he answered that he did not. "For," said he, "during the wheat rush that would be next to impossible. It is not so much the weight as it is the appearance of the wheat, that is the quality, which determines the grade."

He assured them that an experienced inspector could by the use of his plunger easily determine the quality of the wheat and guess at the weight of the carload. There is no reason, he assured them, to infer that because wheat weighed over 58 pounds it must necessarily be No. 1 hard. These three strangers asked him several other questions, to which they got very polite answers. But still they went away dissatisfied, as the result of their visit will show; for after several months of deep thought on the subject, they reported to the anti-monopoly meeting held at Grand Forks a short time ago. The meeting was conducted in one of the Scandinavian tongues. The committee who, as it turns out, had been appointed at a previous meeting to visit Duluth and investigate the wheat inspection department, filed a long and exhaustive report, referring to the "guess work," as they call it, in fixing grades, and complaints of many other abuses, among which were that farmers can only rent elevators provided they guarantee a certain amount of shipments and don't act in opposition to wheat dealers, and that owners of elevators in Minnesota and Dakota work against the farmers. The report suggested that the association keep two men at Duluth all the time during September, October, November and December at salaries of \$120 and \$125 per month respectively and expenses to look after the farmers' interests and watch the process of inspection. A dozen or more other wild suggestions were made by this committee.

FLAX INSPECTOR'S REPORT.

We take the following from the last annual report of Chief Flaxseed Inspector S. H. Stevens to the Chicago Board of Trade:

The compulsory disbandment of the inspection force, caused by the exhaustion of the flaxseed of the previous year prior to the maturity of the incoming crop, entails the hardship of annually organizing and educating a staff to perform the manual and mental labor required by the diversified and intricate rules necessary to achieve protection and security. Under the above adverse conditions from the beginning, in four months there were inspected 12,000 Western, 2,000 Eastern cars of flaxseed, and to lake transportation 2,000,000 bushels. During this time there was no congestion, no friction, the operation of the department sitting so lightly on its constituency that inspection appeared but the continuation of the work of nature in preparing the crops to their hands.

The expense to the receivers and shippers of flaxseed for committee work and car service has been reduced to the minimum. It is a rule of the Chicago Car Service Association, that no "service" shall be charged on cars of grain prior to inspection; not so on flaxseed: that is en-

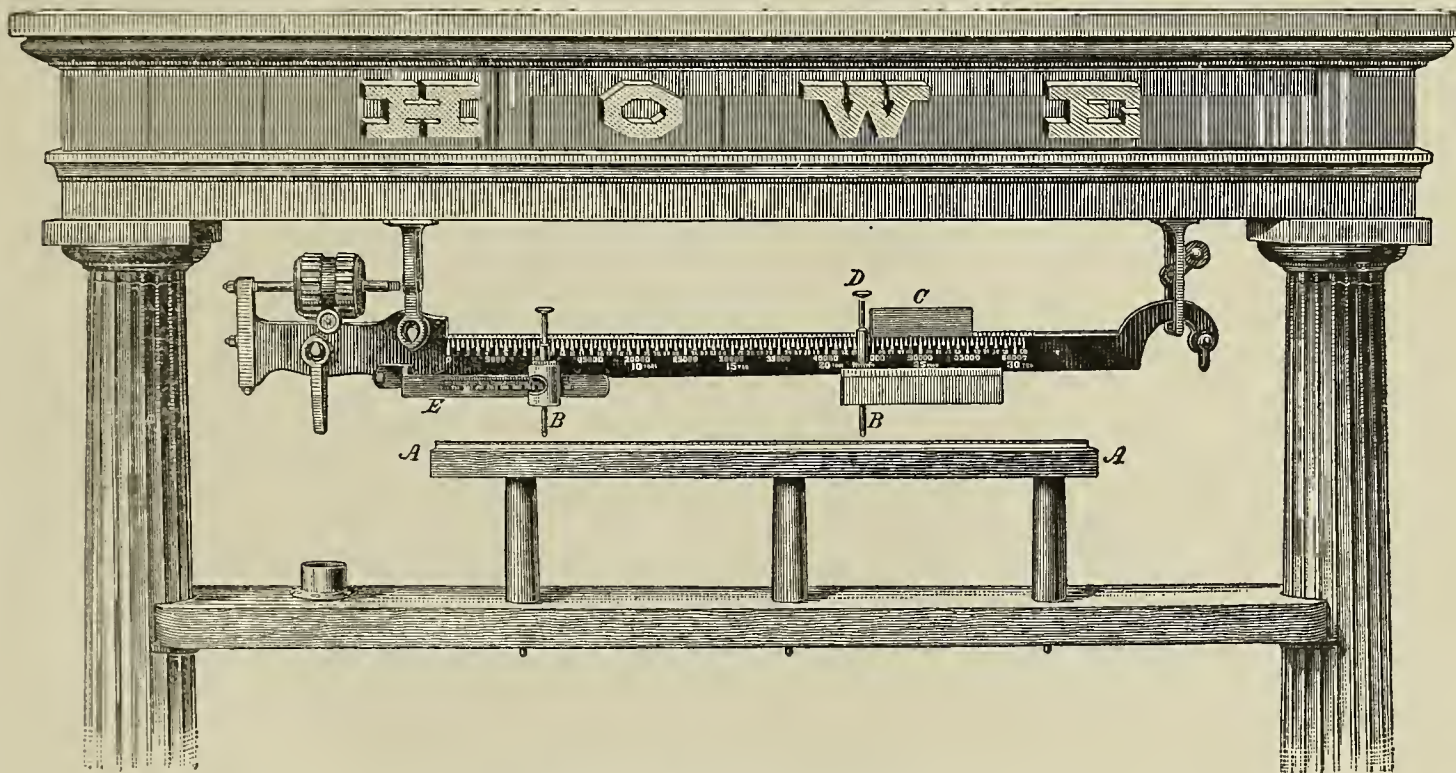
tered up from date of arrival. In the face of the discrimination, this department gave notice that it would hold the receivers harmless from all car service caused by non-inspection of seed. The committee on flaxseed inspection was called but once during the year, and then by order of the consignor. The inspection was declared to be correct.

There has been set apart each day, for the examination and use of receivers, an average and special sample of every car of flaxseed not graded No. 1, that they might of their own knowledge know that the seed was properly graded, and to enable them to intelligently place their offer grade on the market.

SELLECK'S RECORDING BEAM.

That mistakes in weighing grain are due almost entirely to error on the part of the weighman in reading and recording the figures no one will deny. It has always been so and will continue to be so until elevator men equip their scales with reliable mechanical recorders. To put at end this prolific source of errors a simple mechanical device has been invented by Mr. W. E. Selleck of Borden & Selleck Company, of which we herewith give an illustration.

The Selleck Self-Registering Beam can be attached to track, wagon, hopper, or warehouse scales. By its use no mistakes occur in reading the figures on the beam or recording the same. Every mark or graduation on the



SELLECK'S RECORDING SCALE BEAM.

beam has a corresponding mark on the shelf *AA* below the beam. These figures are covered with a strip of copying ribbon. When the poise is adjusted to balance the load on the scale, by pushing down the stamp *B* on the larger beam it will strike the figures on the shelf printing the weight in thousands on a card or ticket, and the stamp *B* on the smaller beam will, by means of a different set of figures on the same shelf, print the fractions of a thousand underneath the thousands on the same card as follows:

108,000	} Gross Weight.
600	
24,000	} Tare Weight.
280	
—	} Net Weight.

Duplicate or triplicate tickets can be taken if desired and will prove valuable evidence in case of disputed weights. A number of the recording beams are already in use and they are said to be giving excellent satisfaction.

The beam is made by the Howe Scale Company, Rutland, Vt. Any desired information can be obtained by writing BORDEN & SELLECK Co., 48 and 50 Lake street, Chicago, Ill.

Advices received by the Indiana State Board of Agriculture indicate that the growing wheat crop has not undergone any material change, and the prospect for more than an average crop is the most flattering for several years.

KIPLING ON THE GRAIN ELEVATOR.

That bright English youth, Rudyard Kipling, visited Buffalo recently and inspected a grain elevator and he says:

"It was my felicity to catch a grain steamer and an elevator emptying that same steamer. The steamer might have been two thousand tons burden. She was laden with wheat in bulk; from stem to stern, thirteen feet deep, lay the clean red wheat. There was no 25 per cent. dirt admixture about it at all. It was wheat fit for the grindstones as it lay. They maneuvered the fore hatch of that steamer directly under an elevator—a house of red tin a hundred and fifty feet high. Then they let down into that fore hatch a trunk as if it had been the trunk of an elephant, but stiff because it was a pipe of iron-clamped wood. And the trunk had a steel-shod nose to it and contained an endless chain of steel huckets.

"The elevator was a Persian well-wheel—a wheel squashed out thin and cased in a pipe; a wheel driven, not by bullocks, but by much horse power, licking up the grain at the rate of thousands of bushels the hour. And the wheat sank into the fore hatch while a man looked—sank till the brown timbers of the bulkheads showed bare, and men leaped down through clouds of golden dust and shoveled the wheat furiously round the nose of the trunk, and got a steam shovel of glittering steel, and made that shovel also till there remained of

the grain not more than a horse leaves in the fold of his nose bag.

"In this manner do they haul the wheat at Buffalo. On one side of the elevator is the steamer, on the other the railway track, and the wheat is loaded into the cars in bulk. Wah, wah! God is great, and I do not think He ever intended Gar Sahal or Luckman Narain to supply England with her wheat. India can cut in not without profit to herself when her harvest is good and the American yield poor, but this very high country

can upon the average supply the earth with all the beef and bread that is required."

FARMERS' GRAIN SALES.

The Northwest, like other parts of the country, says the *Record* of Minneapolis, is struggling to get out of that stage in agriculture that requires it to sell its crops of grain as soon as they are harvested. In the matter of carrying charges for wheat, from harvest to the latter part of the year, that costs in storage, interest and insurance some 18c. a year, a great saving is made to the farmer if he keeps the wheat in his granary, that would otherwise he taxed, say 1½c. a month to carry outside of it. In all the older settlements farmers are getting into that position where they can regulate the sale of their grain and keep it until they may find it prudent to dispose of it, instead of having to sell through stress of financial necessity. A smaller part is each year sold early.

The inquiry comes here very frequently for information of the time when wheat arrivals in Minneapolis will be small. Perhaps the ones asking such questions do not know that it takes, on an average, about 260 cars a day for 300 days in the year to keep the Minneapolis mills grinding, and about 100 cars more a day to supply mills in other places that procure their grain here. With an average requirement of near 300 cars a day for 300 days in the year the amount arriving is not large.—*Market Record*.

BALTIMORE'S ELEVATOR AND GRAIN INSPECTION SYSTEMS.

Apart from her almost unlimited advantages as a port contained in her splendid harbor facilities and efficient custom house service, says the *Baltimore Journal of Commerce*, Baltimore possesses a large and complete elevator system, of which she has abundant reason to be proud, and whose value and importance is enhanced by her equitable grain inspection laws to a degree of perfection which is beyond the most ambitious claim of any other American port.

The Baltimore & Ohio Railroad system controls three large export elevators of an aggregate storage capacity of 4,000,000 bushels. These elevators, which are respectively designated as A, B and C, are located on the south side of the harbor at what is known as Locust Point, which is the freight terminal of the Baltimore & Ohio Railroad. Each of these elevators is provided with dock legs for the unloading of grain from barges and sailing vessels, and each has berths for unloading six steamships at one time. The dock legs possessed by these mighty engines of commerce were added for the purpose of taking care of the grain coming to Baltimore from the Eastern Shore of Maryland and Virginia and the tributaries of Chesapeake Bay. The local elevator of the Baltimore & Ohio, known as the City Elevator, is located at Camden street depot—the passenger and local freight terminal of the road—in the heart of the city. Here are unloaded and stored consignments of wheat, oats and rye for city delivery and local consumption. This elevator has a storage capacity of 300,000 bushels.

The export elevators of the Pennsylvania Railroad system are located on the north side of the harbor, at what is known as Canten, the freight terminal point of this system. Here elevator No. 1, with a storage capacity of 500,000 bushels, rears its broad front, and here elevator No. 3, which, when completed, will have a storage capacity of 1,250,000 bushels, is now in process of construction. This elevator will be in working order by July 1. Both of these elevators will be supplied with dock legs for unloading grain from vessels hailing from the country tributary to Baltimore. The Pennsylvania Railroad also has under construction at Calvert street depot, its passenger and local freight terminal, an elevator of 300,000 bushels' capacity for the accommodation of city trade. This elevator, which is being erected for a purpose similar to that for which the Baltimore & Ohio city elevator is employed, will be known, when finished, as elevator No. 2.

It thus appears that Baltimore possesses facilities for the storage of grain which entitle this port to consideration of vastly more than a merely respectful character, on account of the bare fact that the total capacity of her elevators foots up about 6,350,000 bushels, if for no other reason.

But there is another reason, and one of overwhelming importance to American grain exporters, why Baltimore's inducements to shippers place her in the front rank of American ports. That reason is that uniform justice and equity alone are recognized in her methods of grain inspection.

The grain shipped to Baltimore for export comes from Western Maryland, Virginia, Pennsylvania, and in fact from all the wheat surplus states between the Atlantic Coast and the Rocky Mountains.

The system of inspecting grain adopted by this port is in its principal features the same as that pursued at other ports. Grain that is shipped here is examined and graded by a corps of inspectors appointed by the Corn and Flour Exchange, according to rules and standards adopted by the Exchange. There are inspection committees for wheat, corn, rye and oats, respectively. After the inspectors have finished their work of inspecting and grading a consignment of grain, the receiver of the consignment may appeal to these committees, if in his opinion he has not been assigned the proper grade of whatever grain his consignment consisted. In the event of such an appeal, which frequently occurs, the committees have declined to act simply on an official sample, and have proceeded to Locust Point or Canten, as the case may be, that the grain may be seen in the cars and its exact status determined.

It is believed that the system of grain inspection pre-

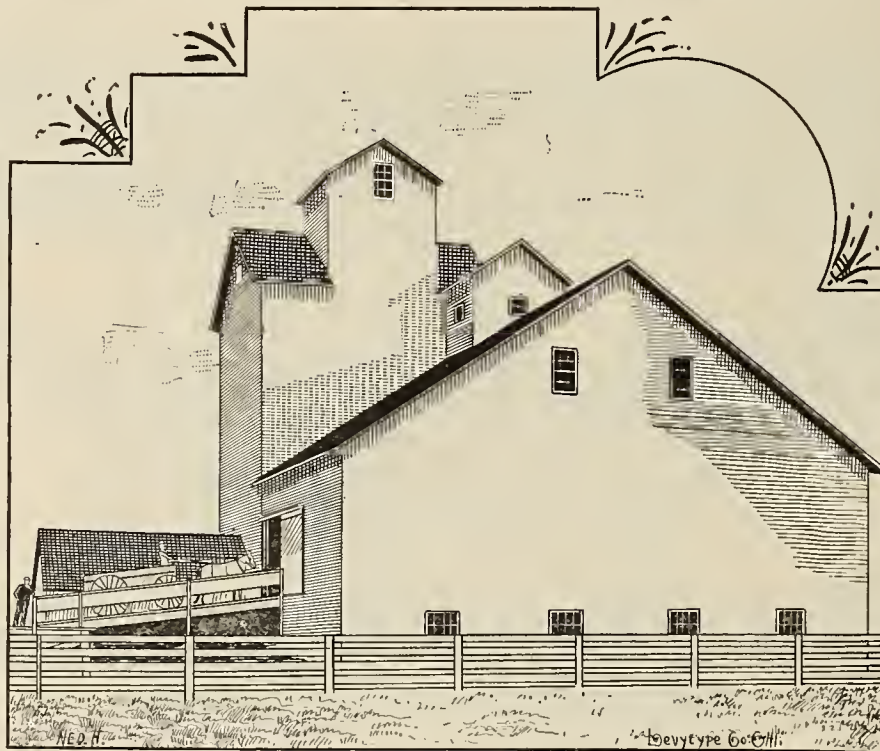
vailing at the port of Baltimore is the fairest that can be instituted, as it is just to the grower and the foreign buyer alike.

The grain trade of America is far from waning. The fact is, it is but just dawning. But, whether dawning or waning, Baltimore will always have more or less grain to export, and this being the case, a system of grain inspection, which, like hers, compels the grading of grain on both its arrival and its export to the foreign buyer according to the same standard, will ever be recognized and approved as the most just to all parties concerned.

Where the inward grading is one thing and the outward grading another, as is the case at some other ports, the Western shipper is duped into sending his grain to market with the idea of receiving an irrelatively high price for it, instead of which he finds that upon arrival it misses grade, although this identical grain, if on steamer for shipment abroad, would be graded. Thus the Western grower is compelled to pay tribute in order that the manipulator may be placated.

MANITOBA OATS.

The Winnipeg grain exchange has taken up the question of the quality of Manitoba oats, with the object of endeavoring to have our farmers enlightened as to the advisability of exercising more care in growing oats.



M. SCHOONMAKER'S ELEVATOR AT REYNOLDS, ILL.

A committee of the exchange has been appointed to interview Hon. Mr. Greenway, to urge him to have a bulletin issued for distribution among the farmers, giving information as to the best kind of oats to grow, etc. This is a very important move on the part of the exchange, and it is to be hoped it may bear fruit. The black and mixed oats usually grown here are not nearly as valuable for marketing abroad as a good white oat. Manitoba oats are also largely mixed with wheat, barley and other substances, which impair their value. At Montreal, while Manitoba oats were quoted at 44 and 44½ cents per bushel of 34 pounds, Ontario oats were quoted at 47 to 48 cents for the same weight, per bushel; this represents a serious loss to Manitoba growers. It would be just as easy to cultivate a white oat as the mixed quality now mostly grown, and the freight would not be any greater on the choicest than it is upon the poorest and dirtiest oats marketed. The three or four cents difference in the value between our oats and the choicer Eastern oats is therefore just so much dead loss to our farmers. In his address at the annual meeting of the Winnipeg Grain Exchange, President Bawlf said that he estimated we would have 3,000,000 bushels of oats for shipment this year. On this quantity of oats we will lose about \$120,000 on account of the quality and variety grown. In the United States markets the same conditions exist. If we were marketing our surplus crop there we would be docked considerably on account of quality. At present the high duties keep our oats out of that country, but this may not be for long. Our surplus oat crop will no doubt continue to increase, and we should endeavor at once to improve the quality so as to obtain the best price. — *Winnipeg Commercial*.

"A NO. 1 ELEVATOR."

Reynolds, Ill., is not a very large town, but it is blessed with enterprising, pushing grain buyers and receives more grain than some of its larger and more presumptuous neighbors. One of its most energetic citizens is M. Schoonmaker, who in addition to being a dealer in grain and seeds is president of the Reynolds Bank.

We give herewith a cut of Mr. Schoonmaker's elevator. Part of the building was originally erected for a hay press and hay storage warehouse. It was 62x62 feet, and did not make a very convenient building for handling grain, so Mr. Schoonmaker remodeled the building last summer and put in an elevator. After consulting with several firms of elevator builders, he let the contract to the Crane Elevator Company of Minneapolis, to cut out of one corner a part of the building, 24x31 feet, and build a new elevator therein. The new part has a capacity of 19,000 bushels. The basement story is 8 feet high, the working floor is 10 feet high, and the first 16 feet above that is cribbed with 2x6-inch plank, and the next 14 feet with 2x4-inch plank. The inner walls extend about three feet above this cribbing. This part of the elevator is 65 feet high, and has six bins with hopper bottoms, and by a system of spouts the grain can be spouted from each bin direct to the cars or to the elevator boot and then elevated to the hopper scale, from which it can also be spouted to the cars. The machinery is run by horse power. The elevator buckets are 6x12 on a 13-inch belt, and elevate the grain as fast as the loads can be dumped. A driveway is cut through the center of the main building. Two dumps and two stands of elevators are provided for disposing of the grain, so that two kinds of grain can be received at the same time.

The bins of the main structure, which is used principally for storage, are 58x22½ feet and 22 feet deep, the bottom being about 5 feet from the ground. A conveyor extends the entire length of these bins, and together with a cross conveyor carries all the grain from this side of the house to the elevator boot. This part of the house is generally filled up in the fall and shipped out the following spring.

The elevator now has a capacity of about 75,000 bushels. The grain handled consists principally of oats, rye and corn, little wheat being shipped from that county. Last year 269 cars of grain were shipped, but this year the shipments will be light, as the farmers who market at Reynolds only had about half a crop of corn and oats. Mr. Schoonmaker has 50,000 bushels of oats in store, but no corn, as feeders take all offered at a higher price than shippers can pay. In

speaking of his elevator Mr. Schoonmaker says, "I have a No. 1 elevator, and can recommend the Crane Company as builders of good elevators."

CHICAGO RECEIPTS FOR 1890.

Owing to the failure of the Galena Division of the Northwestern road to make proper returns, the official receipts made public some time ago were found to be grossly erroneous, and Secretary Stone of the Chicago Board of Trade set to work to correct them. At his request the delinquent road has gone over its books, and figured up the unreported receipts. From this information the secretary has revised his figures, which reveal some wonderful changes, as the following will show:

	First Report	Corrected.	Increase.
Wheat.....	13,370,199	14,248,770	878,571
Corn.....	81,121,451	91,387,754	10,266,303
Oats.....	64,430,560	75,150,249	10,719,689
Rye.....	2,960,931	3,520,508	559,577
Barley.....	15,133,971	19,401,489	4,267,518
Flaxseed.....	6,244,847	6,652,905	398,058
Totals.....	183,261,959	210,351,675	27,089,716

The Trustees, Executors and Securities Corporation of London, which carried through the sale of the Munger-Wheeler elevators in Chicago and other properties in the United States, paid dividends of 15 per cent. on the common stock in 1890 and \$533 on each founder's share. This corporation cannot be blamed for encouraging the English public to invest in American properties.

DESIGNING AND BUILDING ELEVATORS.

BY R. JAMES ABERNATHEY.

There is one thing that very many grain dealers and prospective elevator builders have never learned and that is that an elevator ought to be the result of a well considered design and not the outcome of chance.

The man that proposes to build an elevator should have a plan or a well defined outline of a plan before attempting to excavate, and if he does not know how to make such a plan himself and can depend on no one near him to do it, he should take the train and repair to some place where elevator machinery is made and secure a design from parties engaged in making such machinery as most of them employ men for that purpose who understand how to do it. It is quite true, of course, that some builders of elevators like to feel themselves independent of the machinery manufacturers and entirely without obligation to them in any way because they want to buy machinery at competitive prices from whomsoever they can buy the cheapest. All of which is right enough from their standpoint and to which no serious objection can be urged provided they are competent to hold themselves independent in the matter of making plans, but if not then it is much better to trust a little to the manufacturers and take the chances of getting a square deal out of them without competition. The most of them are willing to act justly provided the elevator man will do the same.

If the grain man does not care to go to see the machine man then he can have them come to him, which is generally the better plan, because when the architect is on the ground he can more intelligently adapt his plans to the lay of the land or, more specifically, the location. Inasmuch as there are many features to be considered in the outline designs of an elevator it may not be considered inappropriate to here briefly consider some of them for the benefit of those aiming to make their own designs or to enable them to so well describe the situation to others whom they may wish to employ to make plans, that no occasion for being on the ground may arise on that account.

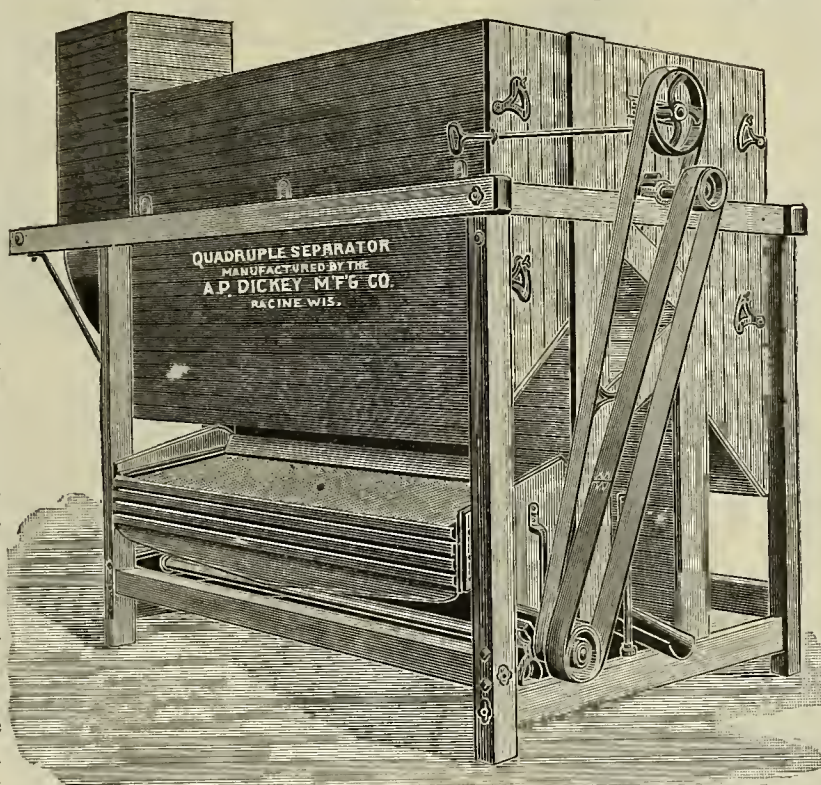
In locating a house on the track the highest available ground should be selected, or the highest within reason. It might be that a very deep cut in the vicinity would make the use of the highest point of ground inadvisable, that, however, is a very rare contingency. The misfortune mostly exists in the ground being too flat and low. Select the highest available site, determine its average height above the track level and make a memorandum of it; then ascertain how far below the track the ground can be penetrated before striking water. This can mostly be determined very closely by an investigation of neighboring wells. Knowing how far above the track the land lies and how far he can go below the track without striking water, the designer has a substantial and most important starting point.

It must be understood by those having but little practical knowledge of the business that in most, if not all cases, where the design is to handle and shell corn and at the same time to carry stocks of loose grain in the elevator, it is advisable, if not actually necessary, to get well down in the ground with part of the excavation and foundation, especially with a pit for the sheller and corn elevator boot; because there must be a reasonable distance between the mouth of the sheller where it receives the corn and the surface of the driveway where it is dumped, and the greater the distance between the two the greater the holding capacity of the dump hopper, and as large a dump hopper as is practicable is always desirable and sometimes demanded by elevator men who, by experience, know the value of having room to dump the waiting wagon loads of corn during a temporary shutdown which, by accident, is as liable to occur in the busiest part of the day as at any other time. If then the ground is such that a deep pit can be dug below the track level without striking water, and the surface of the ground stands several feet above the level of the track, then the architect knows he can design the house with a commodious dump hopper without having to raise the driveway unreasonably high, which is more or less objectionable on general principles, and especially so where ground is limited and no room for the approaches to the driveway without making them very steep and hard to drive upon with a heavy load.

Knowing the facts here called for, the plan maker together with the owner of the house will determine about

how much corn the dump hopper will be required to hold and make the foundation plan accordingly. With the foundation plans ready the builder is ready to proceed with the excavation, and not before, although a great many do begin to excavate, to build the foundation and even the entire house without knowing what they are about except that they are trying to build something. While the foundation is progressing the architect can complete the plans for the superstructure and make out machinery specifications for same and at the same time, if he is a maker of machinery, make out and put in his bid for furnishing it.

In locations where water rises close to the surface of the ground it is generally useless to make calculations for going very deep with the sheller pit as it involves great expense in making a watertight pit. The sheller can be let down to near the water level line, and the boot pit, which can be materially reduced in size, may be run below it and an iron tank or caisson fitted into it. A compromise will have to be made as to the capacity of the dump hopper to avoid making the driveway too high. If in such cases a dump hopper of large capacity seems to be of paramount importance, it will be better to make a double driveway and thus extend the hopper outward from the house and run a drag belt at the bottom of it for drawing out the corn and feeding it into the sheller. In constructing a dump hopper in that way more than double the capacity of a single driveway hopper can be obtained because the slanting bottom running toward the



THE QUADRUPLE SUCTION SEPARATOR.

sheller will not be needed; instead a perpendicular wall at the outer end of the hopper, out to which the drag must be run. All of those points must be considered and determined upon in advance to enable the designer to plan correctly and the builder to proceed intelligently.

In some localities surface water is hard to keep out of the basement of a building. That is best done by draining away from the house, but if that cannot be done then the house will have to be so planned and arranged as to keep above the water with the machinery by having the general basement design substantially as last described.

While especial stress has been placed on plans for the foundation, because that is the beginning, it must not be inferred that the superstructure demands any less advance attention. In fact it is of just as much importance to have it correctly planned before erection as it is to have the foundation planned. To get the machinery in in the simplest possible way and to use as little of it as possible, should be the aim of the architect in designing the upper part of the building; and that is what he will do if he understands his business and is honest, even though a machinery maker and vender, because the shrewd business men among them know that the more simple and effective they make such jobs, the better and more lasting will be their reputation and the more business it will be likely to bring them. It can be plainly understood that if a man proceeds to build a house, as many have done, without plans or any reference to getting in the machinery, much trouble and vexation is more than liable to be the result; and very likely much more machinery such as shafting, pulleys, belts, etc., will have to be used, which adds to the first cost of the job and thus defeats the end intended by the builder, who generally expects

when going it alone, in that way, to get a cheaper job than by employing some one who understands it to make a plan, or at least a general outline that will admit of simplicity in the general arrangement and especially of the machinery.

The expense of a complicated arrangement of machinery does not end with the first cost because ever after the wear and tear expenses of the machinery have to be met. All can understand that if, for instance, two belts have to be put in when with proper plans one would have answered, that the cost of keeping up and renewing the belts is doubled simply on that account. What is true of the belts would be true of all extra and unnecessary machinery. It would be, or is, as the case might be, a useless first expense and is always a useless expense.

It therefore behooves all who contemplate the erection of elevators to know just what they are going to do before commencing to build.

QUADRUPLE SUCTION SEPARATOR.

The Quadruple Suction Separator of which we give an illustration aims not only to overcome the imperfections of other machines, but to present new and valuable features which will commend themselves to practical men. Among these points, are that of less height, in order that it may be more readily spouted to, compact in build and so arranged as to be of its own weight steady of motion, less apt to wear and pound and requiring less bracing, more perfect suction so that it may be controlled at will and made to clean grain to any desired standard by running it once through the machine without waste, making more and better separations, reliable and automatic feed that may be set at will, etc.

The manufacturers believe the machine here-with illustrated will be found to fulfill all the conditions desired in a perfect separator. The Quadruple Suction Separator embodies the ideas of Mr. F. M. Shaw, with the Inter State Grain Company of Minneapolis, an experienced and competent grain man of eighteen years' experience. Its mode of operation is as follows: The grain is spouted to the center of the machine, where a right and left conveyor distributes it evenly the full length of the machine and at the same time forcing the grain through the gate at the bottom of the hopper, and preventing it from clogging with straws or strings, the suction taking hold at the point where the grain drops from one shelf to the other, and coming under the influence of the three different suction, one after the other, before it reaches the shoe where the grain runs onto a coarse scalper, then to the fine sieves and seed screens, after which it is subject to the influence of the fourth suction as it drops to the pit. Two valves control each suction which may be regulated to draw wheat from corn, or fox tails from flax without drawing the flax. The manufacturers make the following claims in regard to this machine:

First.—That it is the only grain cleaner now made with four distinct suction each independent of the other, and controlled by valves.

Second.—That the air crossing the thin stream of grain at right angles will remove more dust, foreign seeds and straws than by having the air go up the trunk, through the grain, as it falls downward, and taking less air consequently less power is needed.

Third.—That by subjecting the grain to three suction before it goes to the sieves more straws and other light stuff is taken out, which removes the danger of clogged sieves and greatly increases its capacity and enables us to use finer sieves, if desired, than we otherwise could.

Fourth.—Better control of the suction than any other grain cleaner made.

Fifth.—That one of the main objections to other separators, that of being too high to be readily spouted to from more than one or two bins at a time, is overcome in this machine, its height being only 6 feet 10 inches from floor to top of hopper and being the lowest separator of the kind in the market.

Sixth.—That it takes less floor space than other cleaners with the same capacity and does not need much of any bracing to keep it in place.

Seventh.—It is the only cleaner with force feed spreader and mixer all combined now in the market; one that feeds regularly the full length of the machine and will not choke.

This machine is covered by patents controlled exclusively by A. P. DICKEY MANUFACTURING COMPANY of Racine, Wis. It is built in four sizes to cover varying requirements. They have such faith in its performance that they will sell it on trial to responsible parties. They ask an investigation of its merits and will be pleased to correspond with interested parties.

TO AMEND ILLINOIS' WAREHOUSE LAW.

Senator John Humphrey has introduced a bill in the Illinois Legislature to amend Section 14 of an act to regulate public warehouses and the warehousing and inspection of grain, and to give effect to Article 13 of the constitution of this state, approved April 25, 1871.

The bill provides that, be it enacted by the people of the State of Illinois, represented in the General Assembly: That Section 14 of an act entitled "an act to regulate public warehouses and the warehousing and inspection of grain, and to give effect to Article 13 of the constitution of this state," be and the same is hereby so amended so as to read as follows:

SECTION 14. It shall be the duty of the Governor to appoint by and with the advice and consent of the Senate, a suitable person, who shall not be a member of the Board of Trade, and who shall not be interested either directly or indirectly in any warehouse in this state, a chief inspector of grain, who shall hold his office for the term of two years unless sooner removed as hereinafter provided for in every city or county in which is located a warehouse of class A or class B: Provided, that no such grain inspector for cities or counties in which are located warehouses of class B shall be appointed, except upon the application and petition of two or more warehousemen doing a separate and distinct business, residing and doing business in such city or county, and when there shall be a legally organized Board of Trade in such cities or counties, such application and petition shall be officially indorsed by such Board of Trade, before such application and petition shall be granted.

It shall be the duty of such inspector of grain to have a general supervision of the inspection of grain as required by this act or laws of this state, under the advice and immediate direction of the Board of Commissioners of Railroads and Warehouses.

The said chief inspector shall be authorized to nominate to the Commissioners of Railroads and Warehouses such suitable persons, in sufficient numbers as may be deemed qualified for assistant inspectors, who shall not be members of the Board of Trade nor interested in any warehouse, and also such other employes as may be necessary to properly conduct the business of his office; and the said commissioners are authorized to make such appointments.

The chief inspector shall, upon entering upon the duties of his office, be required to take an oath, as in cases of other officers, and he shall execute a bond to the people of the state of Illinois in the penal sum of fifty thousand dollars (\$50,000), when appointed for any city in which is located a warehouse of class A, and ten thousand dollars (\$10,000) when appointed for any other city or county, with sureties to be approved by the Board of Commissioners of Railroads and Warehouses, with a condition therein that he will faithfully and strictly discharge the duties of his said office of inspector according to law, and the rules and regulations prescribing his duties; and that he will pay all damages to any person or persons who may be injured by reason of his neglect, refusal or failure to comply with law and the rules and regulations aforesaid; and that he will promptly refund to the railroad and Warehouse Commission of the state of Illinois any and all moneys said commission may pay to any person, firm or corporation upon account of any claim or damages arising from any such neglect, refusal or failure.

And each assistant inspector shall take a like oath; execute a bond in the penal sum of five thousand dollars (\$5,000), with like conditions, and to be approved in like manner as is provided in case of the chief inspector, which said several bonds shall be filed in the office of said commissioners, and suit may be brought upon said bond or bonds in any court having jurisdiction thereof, in the county where the plaintiff or defendant resides, for the use of the person or persons injured.

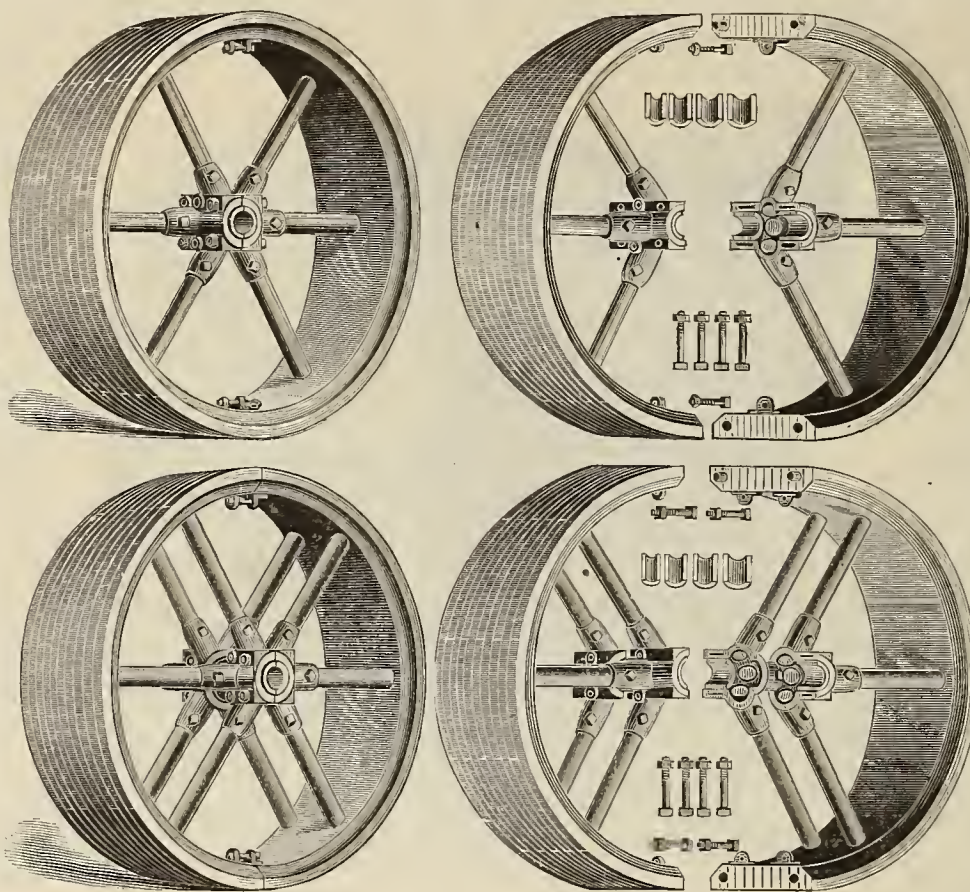
The chief inspector of grain and all assistant inspectors

of grain and other employes in connection therewith shall be governed in their respective duties by such rules and regulations as may be prescribed by the Board of Commissioners of Railroads and Warehouses; and the said board of commissioners shall have full power to make all proper rules and regulations for the inspection of grain; and shall, also, have power to fix the rate of charges for the inspection of grain, and the manner in which the same shall be collected; which charges shall be regulated in such a manner as will, in the judgment of the commissioners, produce sufficient revenue to meet the necessary expenses of the service of inspection and no more.

It shall be the duty of said board of commissioners to fix the amount of compensation to be paid to the chief inspector, assistant inspectors, and all other persons employed in the inspection service and prescribe the time and manner of their payment.

The said Board of Commissioners of Railroads and Warehouses are hereby authorized to appoint a suitable person as a warehouse registrar and such assistants as may be deemed necessary to perform the duties imposed upon such registrar by the provisions of this act.

The said board of commissioners shall have and exercise a general supervision and control of such appointees;



THE SOUTH BEND WOOD SPLIT PULLEY.

shall prescribe their respective duties; shall fix the amount of compensation and the time and manner of its payment.

Upon the complaint, in writing, of any person to the said board of commissioners, supported by reasonable and satisfactory proof, that any person appointed or employed under the provisions of this section has violated any of the rules prescribed for his government, has been guilty of any improper official act, or has been found insufficient or incompetent for the duties of his position, such person shall be immediately removed from his office or employment by the same authority that appointed him; and his place shall be filled, if necessary, by a new appointment, or in case it shall be deemed necessary to reduce the number of persons so appointed or employed their term of service shall cease under the orders of the same authority by which they were appointed or employed.

All necessary expenses incident to the inspection of grain and to the office of registrar economically administered, including the rent of suitable offices and all such claims against the inspection department as may be approved by the Railroad and Warehouse Commission in cases where the liability for such claims cannot be definitely fixed upon any employe who is required by law to give bond for the payment of such claim, shall be deemed expenses of the inspection service, and shall be included in the estimate of expenses of such inspection service, and shall be paid from the funds collected from the same.

THE SOUTH BEND WOOD SPLIT PULLEY.

The mere mention of wood split pulleys to some of our practical mechanics is sufficient to give a blue tinge to the atmosphere from zenith to horizon. Nevertheless wood pulleys have come to stay, chiefly owing to the great convenience with which they can be placed on the shaft, and also because they can be adjusted to fit different size shafts—more than the cost is frequently saved by not having to take down a shaft, or move the bearings.

The popularity of separable adjustable wood pulleys has induced unscrupulous manufacturers to throw on to the market anything they can glue and tack together with strength enough to look well until sold. Their number of sales is large, because the customer as well as the pulley is sold. Careful, discriminating buyers have learned to avoid the makeshifts and to examine the merits of an article before placing their orders. The attention of this class is directed for the "South Bend" Pulley, a new candidate for favor, illustrated by the accompanying cut.

The "South Bend" Pulley is constructed with an iron hub and iron bushings, and the compression fastening is guaranteed not to slip. All users will appreciate this advantage, as one of the chief objections to the ordinary wood pulley with wooden bushings, is that the wood will shrink no matter how thoroughly well the lumber has been seasoned. The immediate result of this shrinkage is a slipping pulley—a constant source of annoyance and danger, causing loss of time in shop or factory. If the slipping pulley forms part of a main drive, fifty men and a number of machines may be compelled to remain idle ten to twenty minutes. Fifteen minutes lost by men and machines eats a large hole in the day's profits.

In a high speed pulley with wood compressed on the iron shaft just enough to not hold, danger from fire is imminent. All such danger and loss are avoided in the "South Bend" Pulley. The construction of the hub allows the pulley to be set screwed when desired. The round arms avoid great loss of power incurred by use of wide arm pulleys due to air fanning. The finish and workmanship are first class in every respect. Another item of importance is the fact that the "South Bend" Pulley can be had at a moment's notice, and in these rushing days, the delay required to obtain an iron pulley is not to be tolerated.

MESSRS. H. W. CALDWELL & SON of Nos. 127-133 West Washington street, Chicago, carry a complete stock; and to

those familiar with the trade, the statement that the Caldwells offer the "South Bend" Pulley for sale, is a sufficient guarantee as to its merit.

A FARMER WHO MIXES.

A farmer writing to the *Michigan Farmer* from Hadley, Mich., on the subject of state inspection of grain says: "I think the state ought to inspect our wheat; can't see why business of such importance should be left to the Board of Trade. It seems as if they might be satisfied with handling our grain, fixing prices and catching 'woodebucks.' I will tell you why some good wheat has not gone to Detroit? A few years ago it made no difference in prices whether we cleaned our wheat or not. Then the buyers began to want our wheat cleaned, for they had shipped in screenings by the carload. After they had got rid of their screenings, they said if they did not mix it others would at Detroit. Then some of us farmers went to mixing, for there was no grade better than No. 1 white or No. 2 red. For the last ten years I have mixed in all the screenings I had from my wheat for seed and bread, and got the top price. Last year my wheat was very poor, but I had some very nice old white wheat, and mixed it with the new, and it all went for No. 1 white. I kept the screenings from the red wheat to mix with this year's wheat, and it all goes for No. 2 red. Now, who is to blame for such damnable practices? We farmers are glad to see you try to right the wrong, whether the rest are or not."

WEIGHING GRAIN AT DULUTH.

We take the following from the report of State Weighmaster McManus of Duluth, to the Board of Railroad and Warehouse Commissioners of Minnesota:

As very little grain was weighed into store here the elevator companies concentrated their work as much as possible. This has enabled the department to handle 22,000,000 bushels in and out with a small force of men.

The elevators and mill in Duluth have required three weighmen, and to do the weighing in the Superior houses the same number have been required. These six men have handled the large receipts and shipments of this port and have given satisfaction both to the country and elevators. I think it appropriate here to speak of the competency of the weighers employed on the force, that has made it possible for me to attain these results.

Complaints of shortages have been received from country shippers, but when we consider that over 39,000 cars were weighed into elevators here, this is not surprising. But such complaints have been few, and with rare exceptions have been satisfactorily accounted for.

That there is every reason to believe from the following that shortages in cars occur before reaching their destination, is patent: Of cars weighed here the past year 265 were found leaking, 469 with end doors open, and 9 with side doors open or gone.

Since the establishment of the weighing department in this state, the above reasons for shortages have been repeatedly dwelt upon by the weighmaster, but without any marked improvement in results. Cars continue to reach this point leaking and with doors carelessly fastened or wide open. I cannot be too pronounced in cautioning shippers against careless cooping of cars.

For the information of shippers of grain to this point, I will say the benefits arising from the state weighing are many. A disinterested man, whose sole duty it is to attend to the weighing, is placed in charge of the scales in each elevator. He acts as a check on the elevator weighman, who, because of other duties required of him other than weighing, is more liable to mistakes than the state weigher, who attends to the scales only.

An erroneous idea exists among some shippers that the weighman, after weighing a car, carries the weights in his memory to his desk or some place where he keeps his reports, and there places it on record in writing. The facts are weighmen have their blanks on a slip and always carry them with them, taking weights directly from scale bar. After a certain number of cars are weighed, and before weights are changed, these two men compare accounts, thus avoiding a possible clerical error.

WHEAT AND CORN SITUATION.

Prime on the wheat and corn situation March 1: "From nearly 400 points in the states of Illinois, Kansas, Missouri, Indiana, Ohio, Michigan, Kentucky and Tennessee I have this information: Are there any signs of insects working on the winter wheat crop? 144 report yes and 304 no, the states of Illinois, Kansas and Missouri complaining more than the others. As to the general condition of the crop, 146 report same condition as a year ago, 200 better and 102 poorer, Illinois making the poorest show of any state.

Corn—From 608 points in Illinois, Iowa, Kansas, Nebraska, Missouri, Indiana, Ohio, Michigan, Minnesota, Wisconsin, Kentucky and Tennessee, I have the following: In answer to question: Are you looking for good movement of corn in March? 82 report yes and 526 no.

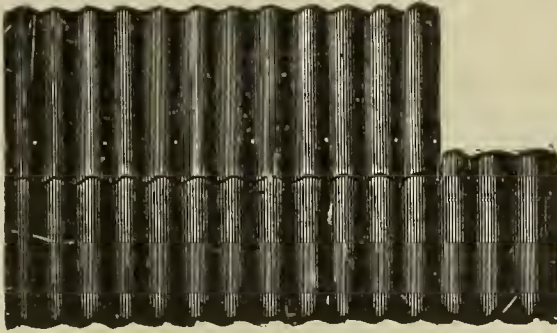
In answer to question, Has the crop of 1888 and 1889 all gone forward? 418 report yes and 178 no.

The question which interests the country at present is the amount of saving the mild winter has made upon the reserves of corn and oats. The saving has been large in one way, but it has gone in another way. Farmers have held back their hogs unusually late this season, believing as they did early in the season that higher prices would prevail. As higher prices did not come they kept holding and feeding. The reserves are almost exclusively in the hands of farmers.

GARRY ROOFING AND SIDING.

We give herewith a cut of the corrugated iron siding for grain elevators, and a cut showing the Garry Cap Roofing as it is being applied to a building.

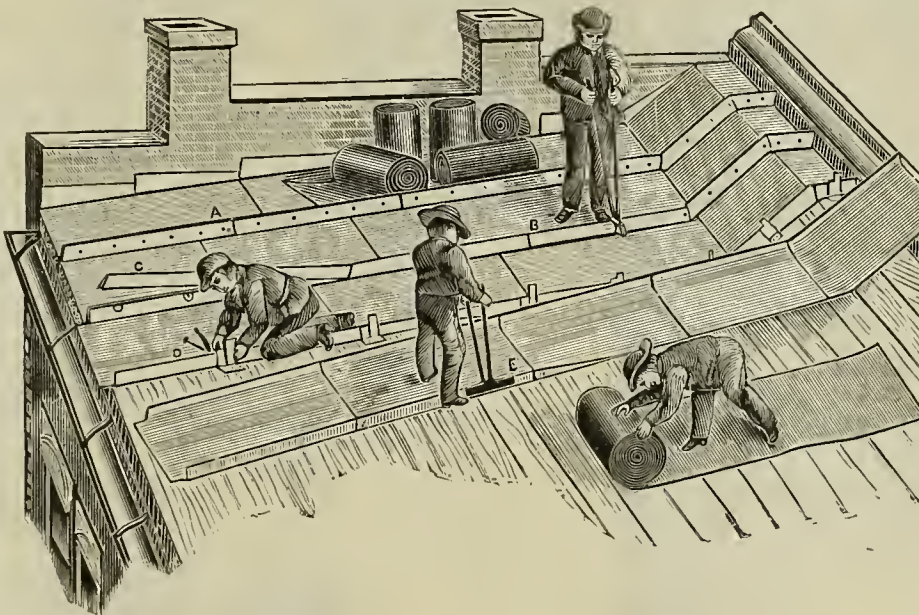
The corrugated iron can be applied on sheeting boards, or on wood or iron rafters or purlines without sheeting boards. The improved machinery used by the Garry Iron Roofing Company enables them to furnish these goods



CORRUGATED IRON SIDING.

with corrugates of uniform shape and size, so no trouble is experienced in making the sheets fit. The regular lengths of sheets made are 6, 7, 8, 9 and 10 feet. Any other lengths can be obtained by ordering. This company also cuts iron to fit roof, sides and gable ends if so desired. Both painted and galvanized iron are furnished. The painted iron is neatly coated by a machine which gives better results than by painting with brush.

The company makes a special corrugated iron siding



GARRY CAP ROOFING.

for grain elevators. The corrugations are made crosswise of the sheet so when applied they will run up and down the building, giving more elasticity to the iron and preventing its buckling when the building settles. In laying the sheet is lapped on the one below about one inch, and then nailed through the upper sheet about one inch above the lap, thus allowing for movement of the iron as the building settles. The regular size of the sheets of elevator siding is 38x26 and 77x26 inches.

The Garry Patent Cap Roofing or Standing Seam Roofing, is particularly adapted to flat as well as pitch roof, and can be put on as flat as one inch fall to the foot successfully. This style of roofing does not require skilled labor to lay it, but can be put successfully by any mechanic. The great advantage of the Garry Cap Roofing is that it is thoroughly fastened by a double cleat which allows free contraction and expansion. The cap is riveted on so that the wind cannot take it off, and it cannot come apart in case of a fire. The cross seams being thoroughly grooved together it is water tight.

This company also manufactures clapboard or drop siding and brick siding, also metallic lath which is being specified very largely by architects where a fireproof building is desired. An illustrated catalogue, giving a full description of these goods, can be secured by addressing the GARRY IRON AND STEEL ROOFING COMPANY, Cleveland, O.

The receipts of domestic hops at New York from September to March was 63,725 bushels against 67,715 same time in 1889-90. The receipts from Europe were 6,395 against 8,024 for same period of preceding crop year. The exports to Europe were 16,636 against 24,607 for the corresponding period of preceding crop year.

MINNEAPOLIS WEIGHING DEPARTMENT.

Grain shippers should peruse the following from the report of State Weighmaster Reese of Minneapolis, to the railroad and warehouse commission:

At the present time this department consists of twenty-nine (29) men, viz.: one weighmaster, two clerks, one scale expert and twenty-five deputy weighers. We are weighing at eighteen elevators, twenty-one mills and in four railroad yards where commodities are hauled from cars by wagon loads.

Since arrangements were made last year for having a yard clerk to check the commodities from the cars to the state weigher at the scales, we have had very little trouble and very few shortages have been complained of. In order to show the condition of things as to this matter last year, I beg leave to quote my report of 1889:

"I found a certain firm engaged in drawing produce from cars using two iron slabs, weighing exactly 150 pounds, under the cushion of the wagon seat. This was evidently done solely for the purpose of defrauding either the shipper or consumer, or both. By this method it was possible to steal nearly five bushels of oats from every wagon load. For this offense I had a party arrested, but I soon found that, owing to certain technicalities, it would be impossible to institute a successful prosecution."

"Another case that I traced up showed that after having received his load and a certificate of weight from the weigher, the recipient deliberately disposed of part of his load before delivering to purchaser, to whom was given the certificate mentioned as being the correct weight of the load. I found that this had been practiced to a considerable extent, and notwithstanding that owing to technicalities the prosecution had to be abandoned, still in this connection the weighing service has scored a decided success."

It could hardly be expected that in a market like Minneapolis—being the greatest primary wheat market in the world—every difficulty would be immediately banished, or any system could be invented that at once would insure absolute perfection. One thing, however, is beyond any dispute or doubt: That there is a necessity of a center and system of some nature for weighing and inspection. Under the old state of things this was met by the chamber of commerce.

For the benefit of the many who are not likely to have an opportunity to see in person, I beg leave to say a word or two as to how the weighing is done in elevators and mills.

As soon as a car of wheat arrives at the mill or elevator, the wheat is unloaded from the car into a pit and elevated into a hopper directly over or below the scales. There it is weighed by two men, one weighing for the state and the other for the mill or elevator. In most cases the hopper is large enough to hold the entire carload. Fair and impartial treatment to all is guaranteed, and our only and sole object is to do what is right between man and man, and there is no inducement for us to do otherwise. The weighers are all sworn officers, and have given bonds, which are filed with the secretary of state. We are here to protect the public interests, and I therefore kindly ask to be at once informed by shippers and receivers if they have any reason to believe that justice has been withheld in the weighing of their produce, and I assure them that no pains will be spared to investigate and ascertain, if possible, the cause of the alleged discrepancy, and to remedy the same. Complete records are kept in our office of all transactions, and any shipper or interested party can at any time receive certificates of weights by writing or calling at our office, giving date of weighing, number and initial of car in which the produce was shipped.

The state weighing department in this city has in its employ an expert scale man, whose duty it is to see at all times that all scales upon which we weigh are correct and in perfect order. This is a new feature of our department, and its importance and efficacy has been repeatedly demonstrated during the time it has been in existence. Even the best scales frequently need an overhauling. The fact that scales balance is not always an indication of their correctness. They may weigh perfectly accurate in small drafts of fifty pounds, one hundred pounds, or a man's weight, but when it comes to weighing a large

draft of several thousand pounds, they may be all wrong. In this connection I ask permission to most urgently recommend to the honorable board that provisions be made for the employment of one or more scale experts, whose duty it shall be to travel around in the state for the purpose of inspecting and correcting scales at primary points, for it has been found that scales in country elevators are often in a very deplorable condition. I reiterate my statement of a year ago, that this would be a guarantee of correct scales, and in my estimation would remove effectually many of the complaints coming from country shippers.

I would further recommend that section 10 of the grain laws be amended so as to change the weight of buckwheat per bushel from 42 to 50 pounds, as the latter is the only weight per bushel of buckwheat recognized by the trade of this city.

State weighing is at present in vogue in all but four of the elevators of this city. These four dispense with our services upon the claim that they handle their own wheat exclusively. This claim to the contrary notwithstanding, I would strongly recommend that our system be extended so as to include every car of wheat, without any exception, that enters the city.

Taking into consideration that we weigh as many as 16 000 cars per month, it would hardly be possible to expect that such a volume of business can be done without now and then an error. Though constantly on our guard, there are shortages of weights reported to us that are mysterious and cannot be accounted for.

Doubtless many such shortages arise from pilfering from railroad cars by organized gangs, who gain their livelihood in this way, and of whose existence we have every proof. I have frequently detailed men through the different yards to catch these thieves, and have succeeded in landing some of the culprits in the reform school. It is invariably the shipper who suffers by these practices. In this connection I beg leave to recommend that a law be enacted making it a trespass, punishable with fine and imprisonment, for a person to loiter around railroad yards without authority or any visible business. I again feel called upon to suggest to the various railroad companies that they show more vigilance in watching their yards and the property entrusted to their keeping and care. improbable as it may seem, it is nevertheless a fact, that cars of wheat are left standing with doors open, where they are accessible, and where anyone, were he so disposed, could bring team and wagon and haul away the contents without fear of discovery or molestation.

Poor coöperation is also a source of shortage, and we deem it perfectly timely to earnestly advise all shippers of grain to see to it that the cars are clean and dry when loaded, that the grain doors are well and safely put in, and that every precaution is taken against leakage and loss.

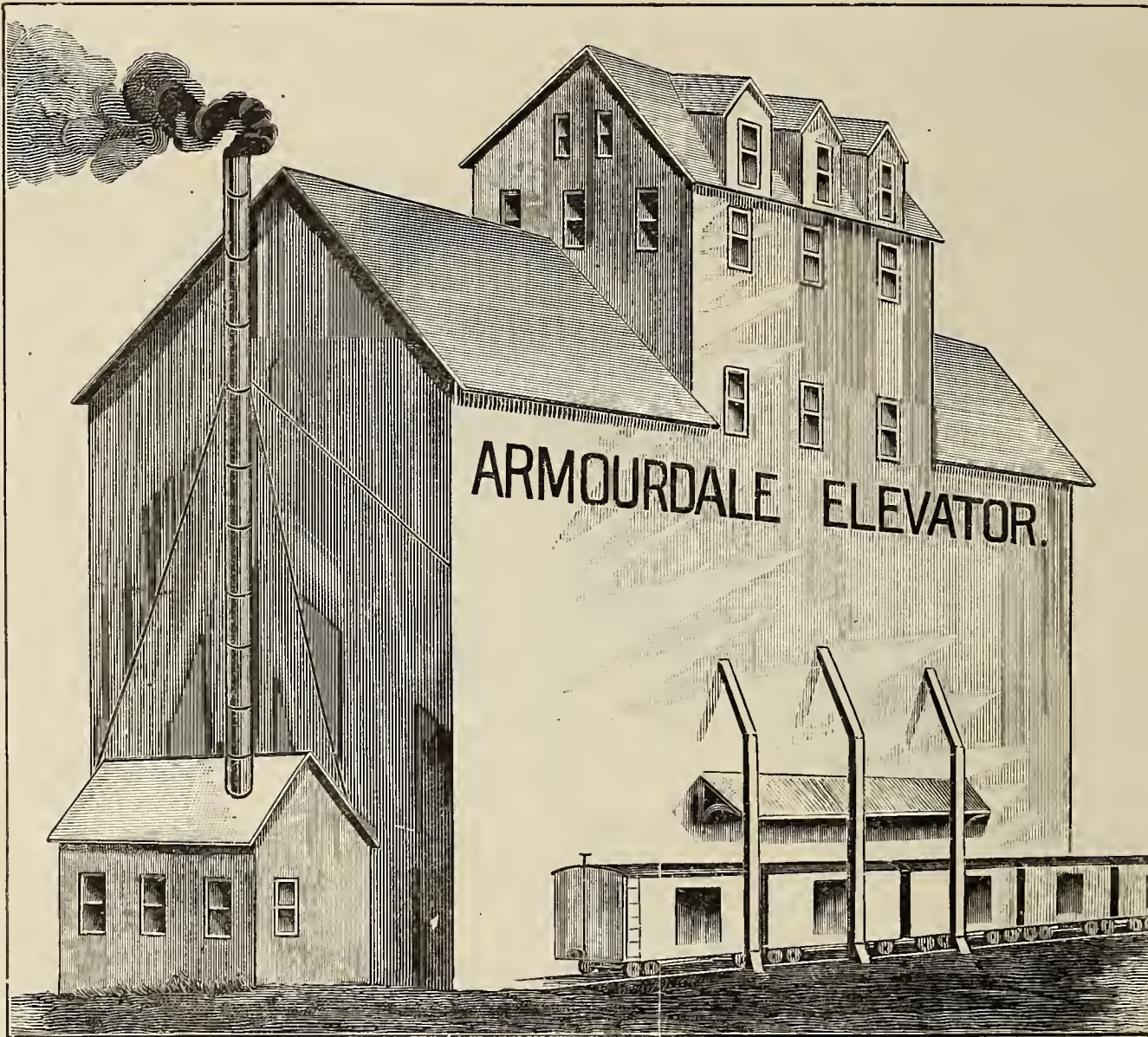
We very often find that our weight overruns that of the shipper. This is something we must discover ourselves, while shortages taking place are invariably reported. We often have shortages of weight reported to us by commission merchants representing shippers, and by shippers themselves, and in such cases always deem it our duty to make a thorough investigation before reporting upon the correctness or error of the weight given upon the car complained of. As before stated, we do not claim infallibility for ourselves or our system, and have in some instances found the weighers to have been in error. On

the other hand, we are often of great help to shippers of grain by discovering the discrepancies of various kinds, such as leaking cars, leaking spouts, wrong spouting, leaking bins, overfilled bins, wrong car number, etc. The members of the state weighing force have instructions to be on the lookout at all times for loopholes where grain may be lost to shippers.

DESTRUCTION OF THE ARMOURDALE ELEVATOR.

About 6:40 o'clock p. m., Feb. 25, J. P. Campbell's Armourdale elevator at Kansas City, Kan., was set afire by the burning of a cooper shop near by and was soon a mass of flames.

On each side of the big elevator were two switch tracks, four tracks in all, filled with cars. Twelve of these cars were loaded with flour, nine with wheat, one was loaded with cornmeal and three were loaded with corn. Besides these there were about fifteen empty grain



THE BURNED ELEVATOR.

cars that had just been unloaded. The grain and all the cars were destroyed.

The Armourdale elevator, of which we herewith give a cut, was owned by J. P. Campbell & Co., and was built five years ago at a cost of \$40,000. The value, however, had deteriorated to some extent since then, owing to constant service. When burned it was handling about thirty-five cars of grain, flour and meal per day, and employed seven men and a foreman. The capacity of the elevator was 250,000 bushels.

The loss on the building was \$28,000; on 20,000 bushels of wheat \$17,000; on 13,500 bushels of oats \$6,000; on 3,600 bushels of corn \$2,000; on wheat on track \$8,000, and \$7,000 on twelve carloads of flour on track. The elevator was insured for \$28,000, and the grain and flour were fully insured.

William Russell, an employe of the elevator company, made a narrow escape from the big building. After groping about half stifled in the smoke for nearly five minutes after the building caught fire he was on the point of giving up when he heard a voice just ahead of him and he made a rush and landed in open air, falling into the arms of Foreman Peterson, exhausted.

If you wish to succeed read the AMERICAN ELEVATOR AND GRAIN TRADE.

MICHIGAN CROP REPORT.

The Michigan monthly crop report was issued from the State Department March 9, compiled from reports from 804 correspondents. Snow fall in the southern and central portions of the state averaged $5\frac{1}{2}$ inches, but it did not remain long enough to afford more than partial protection to the wheat plant. The total precipitation was 3.40 inches, or an inch above the normal. There was much thawing and freezing weather during the month, but only twice was the ground thawed to any great depth. The mean daily temperature in the southern counties for February was 29.4°, or 2.6 lower than February, but $4\frac{1}{2}$ above the normal.

No correspondents in southern counties report the ground well covered with snow; 379 correspondents in this section report wheat injured. The top is, in some fields, badly browned, but the injury to root cannot be determined. The ground in the northern counties has been well covered and little or no damage is reported. The total number of bushels of wheat marketed in February was 1,269,472 and in seven months—August to February—10,050,320 bushels, or about 40 per cent. of 1890, or 5 per cent. more than in the same period last year of 1889 crop.

MARCH CROP REPORT.

The Government crop report for March estimates the farmers' reserves of corn 36.4 per cent. of the crop, in comparison with 45.9 per cent. last year; in bushels, 542 000,000, against 970,000,000 last year. It is the lowest recent reserve, except that from the smaller crop of 1887 and that from the crop of 1883. The percentage retained in the seven corn surplus states is less than that in others. The proportion estimated for consumption where grown is relatively large—57.4 per cent., instead of 51.8 last year. The quantity shipped or to be shipped from the farms is therefore only 138,000,000 bushels, or less than half the surplus of last year.

The proportion of the crop merchantable is 79.5 per cent., against 85.7 per cent. last year. The average price of merchantable

corn is 55.8 cents per bushel; of unmerchantable, 32.9 cents. The aggregate value of the crop on this basis is \$761,000,000, nearly \$7,000,000 more than the December valuation.

The proportion of wheat still in the hands of farmers is lower than an average of the last ten years, the range being from 26 to 33 per cent. It is 28.2 per cent., or 112,000,000 bushels. It has been lower only in two years of the last ten—after the meager crops of 1881 and 1885—which were smaller than that of 1890. Including the visible stocks the supply is 135,000,000 bushels. The consumption of the last twelve months is estimated at 299,000,000; seed used, 52,000,000. The exports have been about 98,000,000 bushels from March 1, 1890.

The low percentage of the spring wheat states are especially noticeable. Half the present stocks will be required for spring seeding. The proportion of the crop estimated for consumption within the country is 52.1 per cent., against 48.1 last year. The average weight per measured bushel is 57.2 pounds. The average of 1889 was 57.7 pounds, which was the precise average of seven crops from 1883. In bushels of 60 pounds the aggregate is 38,000,000, or 90,000,000 less by weight than the preceding crop.

"I'm still here, aint I?"—B. Peters Hutchinson.

COMPLAINT OF KANSAS CITY GRAIN DEALERS.

The Kansas City merchants and shippers are up in arms against the railroads on account of alleged discrimination against that city and in favor of Eastern points. After exhausting all means at their command to induce the railroads to make such rates as would give Kansas City a fair show, without securing redress, the Commercial Exchange of Kansas City has made complaint before the Inter-State Commerce Commission against the Atchison, Topeka & Santa Fe, Chicago, Rock Island & Pacific, Missouri Pacific, and Union Pacific Railway companies. The petition sets forth that the state of Kansas is a great grain-producing state; that a large proportion of this product is constantly seeking a market in which it can be disposed of to the best advantage; the defendants have lines of railways running through Kansas from east to west by means of which the defendants entirely control the matter of transporting grain to market; that the grain of Kansas is entitled to the most advantageous market which can be had; that Kansas City, in addition to being a commercial center of great importance to the country, is naturally the distributing point and market for Kansas grain, and would be such market but for the undue and unreasonable prejudice and disadvantage to which it is subject; that when left to the fair influences which should govern the matter Kansas City would be a better grain market for the Kansas producer than Chicago or St. Louis; that during only one or two months in the year is the value of Kansas grain affected by the prevailing prices at Chicago and Eastern markets.

The natural output of Kansas grain, it is contended, is to the South and Southeast and Europe through the ports of Mobile, New Orleans and Savannah. It is not advisable for the producer to ship grain to a distant market, says the petition, for the reason that the incurring of large expenses for freight in such shipments puts the producer at the mercy of prices which may prevail at that market and compels him to sell at a low price, when if another market were accessible he might obtain a better price. Hence the interest of the producer lies in having a large storage capacity as near him as possible, so that he may ship his grain to that point for storage and leave it free for sale in the best market which circumstances may disclose. When Kansas grain is forced to Chicago or St. Louis, says the petition, it cannot be used to supply the demands of the consuming markets of the South and cannot be shipped abroad through Southern ports without increasing a freight charge for a haul which it ought not to have been called on to make. Unmindful of the rights of the producers to utilize the nearest and best market for storage, distribution and sale, and to avail themselves of all means of transportation to grain-consuming sections of the country, the defendants combined and fixed rates to Kansas City, Mississippi River points, St. Louis and Chicago so that grain producers were denied the right to choose their own market and so that Kansas City could not reap and enjoy the benefits and advantages to which its merchants were entitled. The manifest purpose of the action of the roads it is urged was to force grain to Chicago or St. Louis and to prevent it from being sold or handled in such way that it could reach any other market except at a loss. The wrong and oppression became so onerous that in 1890 public subscription undertook to provide relief in the form of a line of steamers to ply the Missouri River from Kansas City to St. Louis. The defendants emphasized their real purpose by at once reducing the through rates from points in Kansas to Chicago and St. Louis and by fixing the rates from Kansas points to Kansas City so high that it has not since been possible to utilize the cheap water transportation a greatly wronged people had provided in an honest effort to escape the discriminations of the defendants. The principle of a division of through rates on a basis of less than the locals was never intended to serve as a pretext for deliberately combining to prevent producers from choosing their own and their best markets and to deprive commercial centers of business naturally tributary to them.

The complaint further states that the advance in rates recently made by the defendants is in direct conflict with the order of the Inter State Commission made July 19, 1890. The present rates charged by the defendants on wheat, corn and rye are unjust, unreasonable, and excessive, by reason of which local consumers at Kansas City are greatly oppressed and compelled to pay unreasonably high prices for the necessities of life.

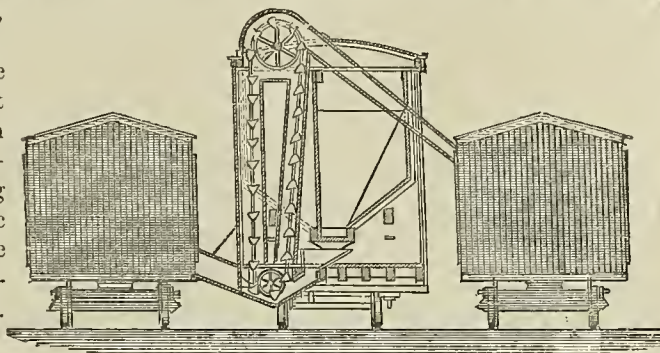
The defendants are charged with being parties to cer-

tain percentage arrangements with other lines and with separate divisions of the Atchison and Rock Island roads, lying respectively east and west of the Missouri River, and it is claimed the defendants refuse to make and maintain through rates with other railroads east of and terminating on the Missouri River, thereby further compelling shipments over the combined lines and unreasonably and arbitrarily denying shippers the right to choose and select the carrier which they may desire to utilize to transport their merchandise.

The petitioners therefore pray that the increase over rates fixed by the order of July 2, 1890, be annulled; that rates from Kansas points to Kansas City be reduced to a reasonable amount; that rates on oats and rye be reduced to those found to be reasonable on corn; that the defendants be ordered to make divisions with lines east of and terminating at the Missouri River on the same basis as divisions are made with lines running both east and west of the river; that the rates fixed by existing tariffs to Chicago and to Missouri River points be ordered reduced to a reasonable basis.

GRAIN TRANSFER CAR.

The old method of transferring grain from one car to another by means of an elevator track and hand shovels is fast going into disuse. The railroad companies found it not only unsatisfactory but very expensive, and they are adopting a newer and better way, which can be easily understood by glancing at cut given herewith. A new transfer car has recently been put to work on the Chicago & Erie tracks at Chicago, which contains all the latest and best improvements. The car when at work stands upon a specially constructed track paralleled by two other tracks, one on each side. The middle track is specially



A GRAIN TRANSFER CAR.

constructed in that it is made and kept level. The cut shows a cross section of the car, and the car is in position to transfer grain from a loaded to an empty car. The transfer car is virtually an elevator, and is equipped with the latest improved machinery for handling grain. When the cars are in position an apron extends along under the doorsill of the loaded car, which directs the grain into a large elevator boot. The grain is unloaded by two men, who are provided with shovels and steam shovels, which they use in turn, and hang on one side of transfer car when not in use.

The grain is then elevated by two elevators having large buckets into a Howe Standard Hopper Scale, with a capacity of 80,000 pounds. The first cars erected contained hopper scales of small capacity, and on this account some objection was made to the use of the cars. However, no longer can objection be made to them, for they do the work as well as a transfer house. As soon as the grain is weighed it is dropped into the elevator boot again, elevated and spouted into the empty car. The weighman gets the net weight of the grain, and the shipper does not have to pay extra freight on account of his car of grain being weighed on a track scale during a wind storm, or on account of wind, rain, hail or ice.

A 15-horse power engine, which is in the end of the car not shown in the cut, furnishes the motive power for the car as well as for the elevator and shovels, and the car can be moved at will. So compact and well arranged is the machinery that the engineer handles all the levers to throw grain to hopper and empty cars. It is not necessary for any one but the weighmaster to enter that part of the car containing the scales.

The cars are put together as strong as wood and iron can be put up. Ten large yellow pine sills extend full length of the car, and a steel ship arch $\frac{3}{4} \times 5$ inches is on each side of car running from truck to truck. This arch is set into and bolted to the oak uprights on the sides of car, and is arched about eight feet in the middle. Trap doors are arranged along the sides of car, so that

dust and grain can be swept away from the scale and foot of hopper from the outside of car.

The machinery above the roof can easily be taken off in case the car is sent over the road and under bridges. Suitable iron awnings project from the transfer car over the door of the car from which the grain is being taken, so that grain can be transferred during rainy weather without being injured.

The Pittsburg & Ft. Wayne Railroad Company transferred with Jumbo No. 3 on the Ft. Wayne tracks at Fifty-first street, Chicago, forty-three cars of corn in ten hours. They also had their chief engineer make a test to ascertain the cost of transferring grain per car. In a test of nearly two weeks the cost was found to be from 42 to 45 cents per car. The engineer kept account of all coal, oil, waste and everything else used. The force consisted of one engineer and four or five men. They handled on an average thirty-five cars per day of various kinds of grain, taking them as they came in train. The saving can be best realized when it is stated that the cost of transferring by the old method, from a high to a low track, averaged \$1 per car, not including the cost of unsatisfactory track weights.

Ten of these grain transfer cars are now being used in Chicago and two in Kansas City. The time is not far distant when all the railroads will use these cars for transferring through grain.

MEXICAN METHOD OF THRESHING.

Between donkeys and men is divided the work of bringing to market fodder from the threshing floors. The Mexican method of threshing—save on a few great haciendas, where American machinery is used—is of the Scriptural sort; the grain in the ear is laid on the threshing floor, and horses and cattle or goats are driven over it; after which the straw is removed and the grain is winnowed from the chaff by throwing both together by the shoveling into the air when a brisk wind is blowing. The straw thus obtained, being softened and broken into short lengths, is eaten by asses and even by horses with relish—indeed, a serious objection on the part of Mexican farmers to American threshing machines is that the threshed straw remains unbroken and hard.

In order to bring it to market the fodder is baled in a netting of cords, and as the bales are large and are packed solidly they make a load that no one but a professional burden bearer could carry far. This whole process is very like that pursued in the south of France, where the grain is threshed on a threshing floor by dragging over it a heavy wooden roller, and is winnowed by throwing it against the wind, and where the bruised straw is brought to the barns baled in sheets; but in France the bales are loaded on wagons, not on the backs of men.—*Harper's Weekly*.

GRAIN AT CHICAGO.

The following table shows the receipts and shipments of grain at Chicago for February:

	RECEIPTS.		SHIPMENTS.	
	1891.	1890.	1891.	1890.
Flour.....	322,149	322,554	281,654	227,150
Wheat.....	597,277	293,275	731,252	401,853
Corn.....	3,540,617	4,136,965	2,658,684	5,314,880
Oats.....	3,644,802	3,827,429	3,075,660	4,405,882
Rye.....	115,888	190,472	197,987	97,295
Barley.....	1,008,726	1,317,544	612,388	911,444

An exchange says: "A farmer near Gorrie, Huron Co., Ont., hauled a load of oats to the nearest market and sold them at the ordinary market price. The load seemed rather heavy to the practiced eye of the buyer, and an examination showed that sand had been deliberately used to increase the weight. The farmer was hunted up, threatened with legal proceedings, and assessed a good round sum for his novel method of assisting the product of his sown acreage."

The San Francisco *Herald of Trade* says that "all the wheat from Eastern Oregon and Washington is being shipped East by rail, and not a pound is going to Portland. Four or five train loads have gone East daily on the Union Pacific and the Northern Pacific for the past six weeks, and there are not more than 1,000,000 bushels left in the warehouses in the Inland Empire, and about a million more in the hands of the farmers. Shippers say this is partly owing to the excessive charter rates demanded by ship owners."

Queries and Replies.

Questions and answers are inserted under this head free of charge, and all are invited to avail themselves of this column.

No. 45. Grain Inspection.—If "Investigator" will read the article in this issue headed "To Amend Illinois' Warehouse Law" he will find a reply to part of his query in the February issue.—Ed.

No. 46. Address.—Will some reader of the AMERICAN ELEVATOR AND GRAIN TRADE please give me the address of George W. Nye, who recently patented an alarm bell for grain elevators?—ELEVATOR MAN.

No. 47. Price of Corn and Wheat?—Will some reader of the AMERICAN ELEVATOR AND GRAIN TRADE please inform me through its columns what the prices of wheat and corn are when delivered here in car lots? and oblige—J. H. WALKER & Co., Reidsville, N. C.

No. 48. Elevators and Dumps.—Will some of the readers of the AMERICAN ELEVATOR AND GRAIN TRADE please inform me if any elevators are built with ordinary buckets and chain that will elevate small grain, also corn in the ear? Are there dumps made that dump the whole platform? If so, who are the manufacturers? Do you know anything in regard to the practical workings of a portable dump and elevator made by John S. Kidd of Des Moines, Ia.—Respectfully, MARTIN.

No. 49. Bugs in Elevator.—Query No. 43 in Queries and Replies column in the AMERICAN ELEVATOR AND GRAIN TRADE, "I. G. N.," describes the weevil pretty accurately. If he will send us a few of the bugs in a small bottle we can tell him if our surmise is correct. If he will smell the wheat in his elevator boot and finds it to have a strong odor, and if there is a fine dust-like sand he can bet that the bugs are weevils.—Truly, McFADDEN & Co., Havana, Ill.

No. 50. Is it One-Eighth Cent or is it One and One-Fourth Cent?—AMERICAN ELEVATOR AND GRAIN TRADE, Feb. 15, 1891, page 203, "Give us the news and we will gladly publish it free of charge." The following may not be news, but will certainly not require indorsing. On page 207 I see, under the head "Elevator Charges at Newport News, Va.," "On grain from cars, receiving, weighing and storing for first ten (10) days or any part thereof, one and one quarter (1¼) cents per bushel." On page 209 the article "Robbers Exposed" gives charges on a certain amount of grain at certain points and says: "The cost of transferring same amount of grain at Newport News is—elevating ⅛ of 1 cent per bushel, etc.," and then gives a lot of lying resolutions which were to have been offered if members of the Chicago Board of Trade had attended a meeting to hear Captain De Puy." The foregoing was sent us from New York, or at least it was mailed in that city. We do not know who sent it. The article on page 207 headed "Elevator Charges at Newport News, Va.," was sent us by the manager of the Newport News elevator, the other was given us by Captain De Puy and is credited to him. If the writer can defend the Buffalo and New York elevator men against the charges made we will be pleased to have him do so, but we must have his name and address, which will not be made public if he does not so desire.—Ed.

Among the many varieties of dent corn tried one or more years, twelve have been tested in 1888, 1889 and 1890, and each has averaged 67 bushels per acre or more, the largest average yield being 80 bushels. Of the yellow varieties Leaming, Flsk, Legal Tender, Clark's Iroquois and Riley's Favorite are medium maturing, and will be found desirable for Central Illinois. Steward's Improved is too late for this locality. Murdock and Edmonds are early maturing, and may be grown farther north. Of white varieties, Champion White Pearl, or Burr's White, and Clark's 110-day are medium maturing, and desirable for Central Illinois. Helm's Improved is almost too late for this locality.—Bulletin No. 13, Illinois Agricultural Experiment Station.

HARDWOOD SEWING MACHINE SHEAVE.

The accompanying illustration shows a recent improvement in sewing machine pulleys, made by the Menasha Wood Split Pulley Company, at Menasha, Wis. It is a split pulley, made to put on the shaft without disturbing the shaft or putting keyseats in it. It is a small wooden sheave. Its special advantages are that it can be put on the shaft at any place in a few moments. They are made any size desired, so the speed of any machine may



HARDWOOD SEWING MACHINE SHEAVE.

be changed in a few moments; and being made of wood, the ropes will run the machine in good shape, even if it is slack or loose. Their cost is much less than iron sheaves, and they can be had by next express after order is placed, as a large stock is always on hand. They are used on drive shaft for sewing machines.

PROFITS IN OAT CLIPPING.

The Omaha Bee says: "The application of the Atchison for leave to ship oats from Chicago via Joliet to the East at 2 per cent. more than the Chicago rate, has brought to light the immense profits to be made in the comparatively new industry of oat clipping. The plan is to buy oats in Chicago and ship them to Joliet, where they are clipped. This process consists in taking off most of the husk and winnowing out all the chaff. This refuse is sold at a profit over the cost of transportation and clipping, and the oats themselves almost doubled in value. Oats this year run about 26 pounds to the bushel, but after they are clipped they weigh as high as 40 pounds. The Michigan Central is the only east-bound line from Joliet which could have joined in making the 10 2 per cent. rate. The application of the Atchison for the rate was refused, but the profit in the clipping is so great that the oats can stand the full local rate to Joliet in addition to the 10 2 per cent."

This is a startling piece of information, or rather misinformation. In private elevators in Chicago are a number of oat clippers of the best make and of the latest improved design, and oats can be clipped as cheaply here as at Joliet. If Joliet elevator men desire to clip oats we doubt not that they could ship in enough over the four railroads centering there to keep them busy. If they work it right they could get an in-transit rate.

OLD HUTCH WAS INTERESTED.

A lady—we shall not tell her name—had a most amusing experience with Benjamin P. Hutchinson the other day. This lady is deeply interested in charitable work, and ever and anon she lends herself to the disagreeable task of soliciting money contributions to such worthy causes as she may happen to have in hand. This is rather ungrateful employment, but this lady applies herself cheerfully to it, for she recognizes it as a part of her Christian duty. It befell that this worthy woman had occasion to approach Mr. Hutchinson the other afternoon, and she did so in the spirit of charming good nature which is, perhaps, her most conspicuous characteristic. Now, Mr. Hutchinson is a wary bird and seldom it is that he is caught in a corner by anybody. But this particular lady was so exceptionally bright and exuberant that the crafty millionaire gave up a crisp \$20 bill almost before he was aware of it. And then, as we can easily suppose, he began to regret it. On her part the fair solicitor was considerably surprised; she had heard that he was a hard, unfeeling man, yet had he not responded promptly and generously to her appeal? She was so grateful that she insisted on shaking hands with the old man, and as she did so she remarked, feelingly: "We do not always get our reward here, Mr. Hutchinson, but we should remember that the Lord loveth a cheerful giver."

"Yes, I've often heard tell," answered Mr. Hutchinson, drily, "but I'm more interested in findin' out the Lord's opinion uv a cheerful beggar."

Trade Notes.

If a man can do business, he should let it be known.—Benjamin Franklin.

H. T. Buchanan, manufacturer of fanning mills and screen doors at Hillsdale, Mich., recently lost \$2,500 by fire. Fully insured.

When you expect an advertisement to create business, word it for business. An advertisement has no life in itself—it depends for its efficiency upon the vigor with which you endow it.—When.

At first your advertisement may be seen and hated;

A few times seen, it is more kindly rated;

Forever seen, it every purse unlocks.

Persistent advertising is "what knocks."

Holbrook & Sherburne, manufacturers' agents of grain elevator machinery and supplies at Minneapolis, Minn., have dissolved partnership. Mr. C. D. Holbrook; having bought the interest of D. L. Sherburne, will continue the business at room 4, Corn Exchange.

An advertisement in a leading paper travels hundreds of thousands of miles between sunrise and sunset and on all the railways, rivers, roads and cross roads, north, east, south and west. It is up and away before the commercial traveler has breakfasted.—Cincinnati Commercial Gazette.

Thornburgh & Glessner, 110 and 112 South Jefferson street, Chicago, Ill., are prepared to contract for the supplies and full equipment for elevators, cotton seed oil mills, phosphate works, etc., in all parts of the country. They prepare plans and estimates, and solicit correspondence on this subject. This concern is composed of "hustlers," and their work has been eminently satisfactory.

The Webster Manufacturing Co., 195 South Canal street, Chicago, has recently introduced a very valuable specialty for elevators and other large shippers, called a safety car puller, with friction clutch attached, which operates by rope transmission. In case of accident this feature is of great value, as the machine can be thrown out of gear at once. The rope drum is also a great convenience where parties are cramped for room, besides effecting a saving in ropes by keeping them in good condition. An illustrated catalogue and price list of this and other specialties will be mailed upon application.

W. J. Clark & Co. of Salem, O., the manufacturers of the Salem Elevator Bucket, have recently completed a number of very large and strong buckets of quite a novel shape for a new kind of coal elevator in New York City. The buckets have no back—the leg in which they work serves for a back. The fronts of the bucket are a vertical segment of a circle, and the elevator leg has an opening in its back near the top at the point of discharge, through which the coal slips out of the buckets as they pass into a conveyor placed between the front and back legs of the elevator. The object is to avoid breaking the coal, as when it is thrown from buckets in the usual way.

IN NEW TOGGERY.

The Washington Bureau of Agriculture, say the *Market Record* of Minneapolis, is out in a fresh report of foreign crops. The report very innocently gives out special facts bearing upon crop prospects and prices—things known and acted upon in commercial circles so long ago they are forgotten. Being brought out afresh, in a solemn way and clothed in official halo, the facts are again doing duty as news, not being recognized in their consequential toggerly.

Crop estimates concerning the amount of grain remaining in Nebraska elevators and farmers' hands have been disturbed by developments in connection with the bids received by the state relief committee for furnishing \$50,000 worth of seed grain to those farmers whose crops were ruined by last year's drought. Numerous notices were received from various portions of the state indicating that large quantities of wheat are held by farmers of which the trade has been totally ignorant. Grain men are employing every resource to ascertain something definite on the subject, as it is thought the supply may be sufficiently in excess of estimates to influence quotations.

COMMUNICATED

[We invite correspondence from every one in any way interested in the grain trade, on all topics connected therewith. We wish to see a general exchange of opinion on all subjects which pertain to the interest of the trade at large, or any branch of it.]

WILL SOW LARGE ACREAGE.

Editor American Elevator and Grain Trade:—We are having a very open winter here, but the roads have been good, so that farmers have had an excellent opportunity to market the largest corn crop we have had for ten years. This fact, in addition to the good prices paid, makes our farmer friends feel happy. They are preparing to plant a large acreage in the spring.

Respectfully yours, CRABBS & REYNOLDS,
Crawfordsville, Ind.

WILL ADD MACHINERY.

Editor American Elevator and Grain Trade:—We have succeeded to the grain business of the Huntoon Company at this place. We desire to put a grain cleaner and feed grinder in our house. Do you know of any one who has a second hand machine for sale? If so, please let us hear from you. Inclosed find \$1, for which send us the AMERICAN ELEVATOR AND GRAIN TRADE for one year.

Yours respectfully, LANGENFELD, POLDERS & Co.
Earliug, Ia.

WHAT GRAIN MEN ARE DOING.

Editor American Elevator and Grain Trade:—I would like to see more letters from grain dealers and elevator men in the AMERICAN ELEVATOR AND GRAIN TRADE, and I think other grain dealers as well as myself would be very much interested in hearing what the grain men are doing in different parts of the country. So brother dealers take your pen in hand and give us a few lines on any topic which may be of interest.

Yours sincerely, WIDE AWAKE.

ARE BUILDING.

Editor American Elevator and Grain Trade:—Geo. Becker & Co., commission merchants and dealers in grain, hay and mill feed at Louisville, Ky., are building a large warehouse for storing hay and mill feed, also a grain elevator with a capacity for about 20,000 bushels of grain connected on the tracks of the Louisville, New Albany & Chicago Railway. I give you this as we see you note all such enterprises in your journal.

Respectfully, LOUISVILLE.

EXPENSIVE MUSIC.

Editor American Elevator and Grain Trade:—I was in a grain elevator recently making a friendly call. A loud noise from three of the elevator legs attracted my attention and I asked the proprietor what was the cause of the racket. He replied that it was only the belt running from side to side, scraping the casing and that it did no harm. This is a sample of the careless way some men have. He said it did no harm, but when he looks into the matter he will discover that a great deal of harm was done. The belt will be ruined, the casings worn out, the buckets will catch and be raked off or have their shape altered. Power is wasted by the grain dropping down the descending leg to be elevated again and by the scraping against the sides of the casing where the friction may cause fire. He will find that the noise is a very expensive kind of music before he is through.

Respectfully, HAWKEYE.

ROPE TRANSMISSION.

Editor American Elevator and Grain Trade:—As some of the grain elevator men may be interested in the transmission of power by wire rope I will relate my experience with it:

We had tried many things to keep the rope running smoothly, but met with no success until we hit upon the following expedient: We drilled three-eighths inch holes in the iron sheaves seven inches apart and filled with basswood blocks, cut end wood, put 2-inch wood screws through the holes we had bored to hold the blocks in place. We then turned grooves in the wood surface and wound one-eighth inch wire around the blocks to hold them on the iron sheave. This plan proved to be just

the right thing and we have had no trouble since. Our rope runs slack and makes no noise. Whenever the rope becomes restless we have the uneven spots on the pulley turned off. These blocks will last over a year and cost only \$10 per wheel.

Yours respectfully, WATER POWER.

ACCIDENT AT ELEVATOR.

Editor American Elevator and Grain Trade:—An unfortunate accident occurred at Nokomis, Ill., Feb. 14, by which a boy 10 years of age lost his life. N. Bentz, a grain dealer, was engaged in loading a car of corn when the boy was accidentally suffocated by the grain. A coroner's inquest was held and the jury rendered a verdict in accordance with the facts given, completely exonerating Mr. Bentz of all blame for the accident.

Yours respectfully, NAKOMI.

WOULD BE OF BENEFIT.

Editor American Elevator and Grain Trade:—When I received my copy of the AMERICAN ELEVATOR AND GRAIN TRADE, and was looking at it, Mr. Blank came into my office. I showed it to him, and told him I thought he should take it. I felt that he could get some information at times, through this medium, that would be of benefit to him. After he had looked at it for a few minutes, and particularly at the article on "Grain Inspection at Chicago," and the picture of the Chief Inspector, he requested me to subscribe for it for him, as he seemed to think that I had more time to spare than he had. Inclosed please find \$1, for which send the AMERICAN ELEVATOR AND GRAIN TRADE for one year to him. Please commence with the February number and send promptly.

Respectfully, W. R. MORTON.
Ciuciunati, O.

TRANSFER CARS.

Editor American Elevator and Grain Trade:—We have noted communications in your valued journal regarding transfer houses and cars for transferring grain at terminal points from car to car, also regarding registering and recording beams on scales. "Toleration," in a communication in your February issue, shows lack of information regarding "Jumbo Transfer Cars" and scales used therein, which we should be glad to have corrected. A goodly number of those cars are constantly at work in Chicago, having hopper scales of 80,000 pounds' capacity at one draft.

These cars are meeting with the most remarkable success under the closest inspection of the Board of Trade weighmaster. The cost of transfer is reduced to a minimum, and the facility with which the work is accomplished is astonishing to the railroad officials. Great improvements have been introduced since the first car was constructed which has a scale that carries but half a carload at one draft.

Yours truly, BORDEN & SELLECK Co.
Chicago, Ill.

The decrease of country wheat supplies in elevators for the month of February was 848,000 bushels, against a decrease for February, 1899, of 1,346,000 bushels, with a supply now of 236,000 bushels less than March 1 last year. The total supply of wheat in Minnesota and North and South Dakota is 21,888,879 bushels, which is only about 200,000 less than the total a year ago.—*Minneapolis Market Record*.

The visible supply of grain as compiled by Geo. F. Stone, secretary of the Chicago Board of Trade is as follows:

Grain.	March 7, 1891.	Feb. 28, 1891.	March 8, 1890.
Wheat, bushels.....	22,790,750	22,926,411	28,314,149
Corn, bushels.....	2,587,283	2,767,256	14,517,340
Oats, bushels.....	2,763,886	2,853,042	4,858,920
Rye, bushels.....	392,531	398,774	1,587,638
Barley, bushels.....	2,057,908	2,439,464	1,658,821

This is a March day, says the *Market Record*, a day in the month given over to croakings and winter crop damages. No longer can we claim a snow covering to protect the tender plant from frost and rain and sun. We still have our hope that the weather may pursue its old ways and save us the loss of confidence in a harvest after seed time. We have had occasion to mourn for the disappearance of the big crop greeting in recent years, but as a little crop has poured into the lap of Minneapolis more wheat than ever before, many would like to see a big crop once more to see what it would do.

SCREENINGS.

When wheat jumps up, dealers, shippers and speculators run.

Some one says: A farmer is one who works the farm, and an agriculturist is one who works the farmer.

The expression "mazy dance" must have originated from the corn dance of the Indians.—*Commercial Bulletin*.

It's no wonder that the man who cries "hot corn" from the street corners has a husky voice.—*Binghamton Republican*.

Norton & Son, Tallula, Ill.: "We have come to the conclusion that the AMERICAN ELEVATOR AND GRAIN TRADE is just what we want."

In some parts of Michigan the complaint is that wheat is damaged by having the dry earth blown from the root of the plant leaving it exposed.

Making soap from corn is said to be one of the late chemical discoveries. Corn soap would be better for many prisons to use than corn juice.

Elevator men who wish to be elevated in their own business should read carefully the AMERICAN ELEVATOR AND GRAIN TRADE—only one hundred cents a year.

Ethel—"Papa says the wheat market is very unsteady." Edna—"Why, Uncle George said this evening that wheat was tight!" "Well, that is what makes it unsteady."

America: Teacher—"Now, children, which state produces the most corn? Pupil—Kentucky. Teacher—Wrong. Why do you say Kentucky? Pupil—Kentucky produces the most kernels.—*Omaha Bee*.

Old Mrs. Fussabout—"Running a bucket shop in New York, is he? Well, I'm powerful glad to hear it. I was always wishin' my boy Hank would settle down to some such quiet respectable trade."—*American Grocer*.

A Louisiana paper says that the people in that state complain much from a want of sleep, caused by the rapid growth of the cane and corn crops keeping up such a noise and confusion as to render the closing of the eyes the next thing to an impossibility.

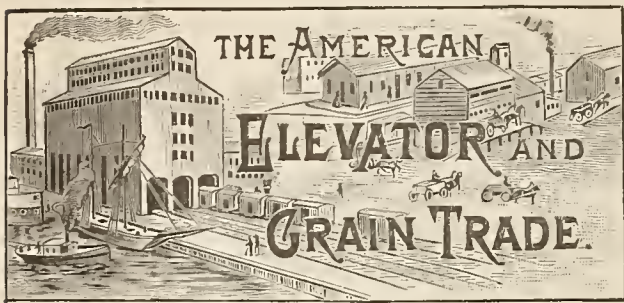
A Goose was recently arrested in Kansas for stealing wheat. It was not goose wheat either, but Turkey wheat. The thief was easily apprehended, for the robbed knew that any one who was goose enough to steal his wheat must go by the name of Goose. Mr. Goose is now boarding at the county jail.

A terrible disease has broken out in Dickinson county, Kan., which in a great measure is due to the short crops and high prices. Those who are in a position to know claim that it is cereal kleptomania. As its attacks upon the victim are nocturnal, elevator men who do not employ a watchman will do well to strongly bar their grain bins.

Farmer's Boy—"Pop, the corn husks in this field are very thick." Old Farmer—"That means we're goin' to have a hard winter." Boy—"But the corn husks in that other field are very thin." Farmer—"Hum! I got that seed from th' Agricultural Bureau at Washington, an' I shouldn't wonder if it was darn fool enough to go by Greely."—*New York Weekly*.

More wheat was shipped from Superior, Wis., in 1890 than from any other Lake Superior port. Two-thirds of all the grain sent from the head of Lake Superior in 1890 was shipped from Superior elevators. In view of the importance of the commerce of Superior, the Deputy Collector recommends that so much of the customs district of Superior as lies within the state of Wisconsin be made into a separate customs district with headquarters at Superior.

A sample of "Ladoga" wheat was raised in the Prince Albert district, territory of Saskatchewan, 340 miles north of the international boundary line. It is a beautiful wheat, weighs about 65 pounds to the measured bushel, and it is said to be equal for flouring purposes to any wheat grown. It was raised on the farm of William Plaxton and is the third crop raised from the imported seed. It was sown about April 22 and harvested Aug. 15. It has many of the qualities of the Fyfe wheat, but ripens ten to fifteen days earlier. With each year of cultivation the grain improves, growing thinner in hull and harder. The yield from Mr. Plaxton's field averaged 27 bushels per acre.



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A. J. MITCHELL, - - - Business Manager.
HARLEY B. MITCHELL, - - - Editor.

ADVERTISING.

This paper has a large circulation among the elevator men and grain dealers of the country, and is the best medium in the United States for reaching this trade. Advertising rates made known upon application.

CORRESPONDENCE.

We solicit correspondence upon all topics of interest connected with the handling of grain or cognate subjects.

CHICAGO, ILL., MARCH 15, 1891.

STORING AND HANDLING GRAIN BY RAILROADS.

A maximum freight bill has been introduced in the Kansas Legislature, which, if it becomes a law, will effect an average reduction of about 15 per cent. in freight rates. The bill also provides that the Railroad Commissioners shall have power to compel railroads to furnish cars at any station on their line within a reasonable time, and furnish suitable room for storing grain and other freight and for loading and unloading the same.

The result of this effort to compel railroad companies to furnish storage and facilities for handling grain will be watched with intense interest by elevator men in all parts of the country. A large number of elevator men in Kansas and Nebraska made a combined effort last year to convince the railroad managers that they ought to furnish facilities for storing and handling grain, and offered to open their houses to the public on the condition that the railroad companies pay them a cent for every bushel loaded into the cars from the elevators. This was a very generous offer, and if it was not accepted when offered the railroad companies will now be only too glad to make a similar arrangement.

Railroad companies furnish storage and facilities for loading and unloading other freight, and there is no good reason why they should discriminate against grain. As it is necessary to have a person competent to judge between the different qualities of grain in charge of each elevator, it will be cheaper for the Kansas railroad companies, and more satisfactory to grain shippers, for the companies to pay the elevator men a small premium for every bushel loaded into cars. If the bill becomes a law, and the railroad companies place inexperienced men in charge of railroad grain warehouses, they will surely prove a constant source of trouble and dissatisfaction.

In building elevators along a line of railroad elevator men virtually solicit business for the railroad company. They furnish better facilities for handling the grain and insure a certain price to the grower for his grain. For this they have received neither thanks nor compensation; but mushroom competitors, who provide no storage

or handling facilities have been given the same freight rate. Justice is all the country elevator men have ever asked for, it is all they want, and justice they should have.

EXPORTS OF BREADSTUFFS.

The last report of the Bureau of Statistics shows that during the month of February the United States exported breadstuffs valued at \$8,348,901, against \$14,640,178 for February, 1890, and for the first two months of this year the exports were valued at \$18,067,487, against \$26,197,798 for the same months of 1890. The exports during the eight months of the crop year ending Feb. 28 were valued at \$72,873,700, against \$94,848,148 for the corresponding period of the preceding crop year.

The wheat exports for February amounted to 3,900,699 bushels, valued at \$3,304,491, against 4,800,470 bushels, valued at \$3,865,325 for February, 1890. During the eight months ending with February, 31,153,997 bushels, valued at \$27,320,209, were exported, against 37,071,465 bushels, valued at \$30,607,224 for the same months of 1889-90.

The corn exports declined from 13,423,811 bushels for February, 1890, to 1,414,719 bushels for the same month this year, and during the eight months ending with February, 20,936,717 bushels, valued at \$10,990,631, were exported, against 55,444,778 bushels, valued at \$23,562,857, for the eight months ending with February, 1890.

The decline in the exports of oats was also very heavy, only 26,415 bushels being exported during February, against 1,285,278 bushels for February, 1890. The exports for the eight months ending with February amounted to 842,049 bushels, valued at \$342,086, against 4,662,455 bushels, valued at \$1,452,364, for the eight months ending Feb. 28, 1890.

The barley exports declined from 119,908 bushels for February, 1890, to 33,239 bushels for the same month this year. During the eight months ending with February the exports amounted to 352,699 bushels, valued at \$248,664, against 1,093,794 bushels, valued at \$606,815, for the same months of the preceding crop year.

The rye exports for the eight months ending with February amounted to 322,912 bushels, valued at \$203,411, against 998,735 bushels, valued at \$539,774, for the corresponding period of the preceding crop year.

BUFFALO'S ELEVATOR POOL.

The Buffalo correspondent of the *Northwestern Miller* says that outsiders who attack the Buffalo elevator system "are either jealous of Buffalo or ignorant of the real situation—probably both." Jealousy has always been and ever will be barred from the columns of this journal, which is devoted to the interests of the trade at large and not to that of any one city or state, or to any single branch of the grain trade.

We shall always oppose trickery or injustice and as long as the elevator men of any city combine to bleed the shippers sending grain that way, we shall cry out against them. We have no objection to combination for preventing ruinous competition, but a combination for compelling those shippers, who desire to send their grain to the seaboard by water, to pay an unreasonable and illegal charge for transferring from lake vessels to canal boats will always receive our opposition.

The charge of $\frac{7}{8}$ of a cent per bushel for transferring a cargo of grain from a lake vessel to a canal boat is too much. It could be transferred for $\frac{3}{8}$ of a cent per bushel and at a good profit to the elevator pool. The elevator pool has taken unjust advantage of Buffalo's position, which virtually gives that city a monopoly of the trade. If it was always to remain in control of the grain handling business of that port it would compel all of the grain to go to the seaboard by other than the Erie Canal route. But new influences are at work and new powers will soon take a hand in the grain handling trade at Buffalo. That the pool may be annihilated and Buffalo elevator companies com-

pelled by competition to transfer grain to canal boats at a reasonable rate is the earnest desire of all lovers of justice.

In the published rates of storage at Buffalo elevators, it is stated that "No grain will be received for transfer." The law forbids the charging of more than $\frac{5}{8}$ of a cent per bushel for transferring grain. The elevator companies make this charge and also $\frac{1}{4}$ of a cent per bushel for storage whether the grain remains in storage or not. The transfer towers and the floaters, which now number about fifteen, were built especially for transferring grain from vessels to canal boats, but as the pool pays the proprietor of each \$5,000 a year to remain idle all grain must be transferred by the elevators. To favor such a bleeding scheme we will agree that one must be prejudiced against and ignorant of what constitutes fairness and justice.

LEGISLATION IN MINNESOTA.

The elevator and grain trade of Minnesota is receiving an unusual amount of attention from the state legislature this session. A number of bills regarding this trade have already been introduced, and the legislature is still in session, so the prospects for more are good.

A bill introduced in the house by Mr. Green provides that two or more persons may associate themselves together for the purpose of operating a public elevator, and that any road must grant them permission to construct, maintain and operate a public house at any of its regular stations on one of its sidetracks upon its right of way. The bill especially provides that the railroad company shall not discriminate on account of capacity or persons, but shall grant applications in the order applications are made. These public elevator companies are subject to legislative supervision and control. This legislative discrimination against the erection of private elevators, and the erection of elevators by individuals, is uncalled for and unjust. The bill is intended to benefit the farmers, but it will not accomplish its purpose. A few farmers' associations may build elevators, but even when regulated by law they will be mismanaged, or fall into disuse from lack of management. Experienced grain dealers will not erect public elevators in the country and submit to state supervision for the sake of procuring a site, so the farmers will not have as good shipping facilities and as good a market in the future, if this bill becomes a law, as they have at present.

Another bill introduced provides that public elevators shall have special bins where grain can be placed and improved by drying and cleaning. It is inferred that it will not be necessary to give the improved grain the same grade in inspecting it out as when it was inspected in, but the grade to which it belongs in its improved condition. The old law requires that grain shall be inspected out of public elevators as it is inspected in. This will be a source of convenience to dealers, and save them the expense of extra inspections were they they to take the grain to a cleaning house for improvement. This bill also forbids interference with inspectors, requires railroad companies to keep wheat cars close together on track, and designates flaxseed as grain.

The most important bill introduced, which bears on the grain trade, is one which provides for an amendment to the constitution. Among other things this bill provides that "All elevators or storehouses where grain or other property is stored for a compensation, whether the property stored be kept separate or not, are declared to be public warehouses, and their rate of charges may be fixed by law. The right of any person, company or corporation to erect an elevator or storehouse for the storing and shipment of grain upon the right of way of any railroad corporation with a capacity for storing 5,000 bushels of grain, or any greater amount on any sidetrack, shall not be denied or abridged, the railroad company to select a practicable site for the same, and the refusal of any corporation to receive grain from and ship it to such elevator or warehouse, in carload lots, at the usual price paid for such services, or to discriminate against it in any particular, shall operate

to work a forfeiture of the charter of such railroad corporation under such reasonable regulations as the legislature may prescribe."

This will make public warehouses of all country grain houses where grain is stored for a compensation, but if the country elevator men do not wish to store grain at the charges fixed by law they can operate their house as a private house. The bill was drafted in the interests of the producers, but it is difficult to see how they will gain anything. The clause regarding the granting of sites may aid the farmers in securing sites for elevators of small capacity, but it will also be of benefit to private elevator builders.

One excellent provision of the bill is intended to do away with the shortage evil and if enforced it will prevent large shortages. If the bill becomes a law all carriers will be required to weigh or measure grain on receipt for transportation and give a receipt for the full amount, and shall be responsible for the delivery of such amount at the place of destination, less an amount not exceeding one-quarter of 1 per cent. for wastage in transportation. Every state should have a similar law on its statute books and enforce it. As this is an amendment to the constitution it must be submitted to a vote of the people.

The agriculturists told the farmers of the state so many lies regarding grain inspection and railroad and elevator companies during the last campaign that now they do not know what laws they need and will try to enact laws for the regulation of the grain trade in all its parts. That the laws will do more harm to the farmers than the grain dealers is not to be doubted. However, it is not likely that Minnesota will be cursed with as many unconstitutional grain laws as was North Dakota last year, for a man of experience occupies the governor's chair, and a few experienced legislators are in the legislature.

A GRAIN TRUST.

The agriculturists or agitators who win the support of a large class of farmers by pleasing them with wild and impractical schemes for improving the condition of their worldly affairs, have proposed another chimerical scheme which is just as impossible as any proposed heretofore. It is to form a grain and live stock trust with the farmers of Iowa, Missouri, Kansas and Nebraska as members.

The president of the Kansas Farmers' Alliance says that district alliances are being formed in every congressional district for the purpose of building cold storage houses and grain elevators. Each district alliance will be made up of delegates from sub-alliances. A record of the actual amount of grain and stock on hand will be kept. No member will sell or give an option on his products, but when he is obliged to sell the alliance will buy and hold until there is a demand for the products at a fixed price the agitators think they should command. Agents stationed at commercial centers will keep the alliance posted regarding the actual demand, which will be supplied, and no more. The alliances of other states are expected to join in the good work of bulling prices. The price will be fixed by adding a reasonable profit to the actual cost of production.

This gigantic scheme will rob the grain and stock dealers of these states of a business, starve the poor and make the farmers independently rich. The "poor, downtrodden, mortgage ridden" farmer of to-day will become a bloated capitalist whom we will all revere. This ideal condition, which a large class of shiftless farmers have grown weary of trying to secure by legislation, will now be gained by a gigantic trust IF, the scheme proves a success.

If the scheme is put into operation the middlemen, who have made a life study and business of the distribution of food products, and now back up their experience and opinions with their own money, will be displaced by cheap, inexperienced, salaried agents, who know nothing about the business, and who will quickly sacrifice the interests of the farmers for personal gain. All farmers who go into the scheme will be fully convinced

by short and costly experience of the great worth of the middlemen to them.

President McGrath says: "No wheat will be on the market unless it is actually to be had and has been produced. There will be no speculating on the grain before the harvest has come. The four states in this trust will practically control the wheat and cattle markets of the United States. The commission each day will wire farmers to send in a certain amount of wheat or cattle, as the case may be, calling on the ones who are the hardest pressed for cash. The amount demanded to supply the market that day will be apportioned among the districts equally, and in turn apportioned by the district alliance. No farmer who is a member of the alliance will sell his products till called upon. By this plan wheat would not be 97 one day and 96 the next, nor cattle 3 cents and again 3½."

The four states in the trust produced about 80,000,000 bushels of wheat last year, or 10,000,000 bushels less than the amount by which the crop of 1889 exceeded that of 1890. With 90,000,000 bushels of wheat less in the supply of the country the farmers are still dissatisfied with prices, surely then 80,000,000 bushels held in storage can not control the market. Other states and other countries produce a goodly share of the world's supply of these food products and until the entire supply is under control, which will never be, prices will not be fixed by this gang of blatant, brainless demagogues or any other set of visionary schemers.

"WE POINT WITH PRIDE."

We are sure our readers will pardon us if we call attention to the visible evidences of growth in this issue of the AMERICAN ELEVATOR AND GRAIN TRADE. It is now nearly a decade since this journal made its introductory bow to the trade. In all that time it has steadily progressed, and is now larger and more secure in the good opinion of patrons than ever before.

The present issue is the largest, both in point of size and circulation, that we have ever issued. Advertisers have found that this journal is indeed an exceptional and cheap medium for reaching the grain handling public; and the demands of advertisers have compelled us again to enlarge the size of the paper.

Our subscription list, too, has, in the past three months, been enlarged beyond our greatest expectations. We believe that this journal is today the best and cheapest medium for advertisers in the United States.

FARMERS' SALES FOR FUTURE DELIVERY.

A case of vital interest to grain buyers has recently been decided by an Illinois jury, and all dealers can profit by the dishonorable act of this producer in trying to break his verbal contract.

The case is that of Ingram v. Brevoort. Mr. Brevoort, a farmer living near Rutland, Ill., had about 1,600 bushels of corn, and in June, 1890, he sold it all to Ingram & Son of Rutland, at 33 cents per bushel. Soon after that grain advanced. A month after the sale Mr. Brevoort, having delivered about \$1,000 worth of corn, stopped hauling and claimed that was all he had sold. Ingram & Son, however, did not propose to be imposed upon by any such trickery. Their demand for the corn not being complied with, they commenced suit and issued an attachment for the difference in price of corn then and the purchase price, which was 15 cents per bushel, amounting in the aggregate to about \$1,575.

Several witnesses swore that Brevoort had told them that he had sold all of his corn to Ingram & Son at 33 cents, but he claimed that he sold only \$1,000 worth. The jury, however, brought in a verdict for the plaintiff and gave him judgment for \$1,484.77. It also found the issues in attachment in favor of the plaintiff.

If dealers would insist on the producer signing a written contract when they buy a crop of grain, few of them would be subjected to the worry of

a tedious and expensive lawsuit. A farmer seldom tries to disprove or shirk his written contract. When a dealer buys a producer's crop the transaction is generally verbal, and if either party tries to break the contract it is generally the farmer. The dealer knows that if he breaks his verbal contract in one instance all the farmers selling grain in that market will soon know it, and those having made verbal contracts with him will have little compunction about breaking their contracts with him. Make your contracts in writing.

A PROSPEROUS FIRM.

We believe we commit no breach of etiquette in calling especial attention to the advertising pages in this issue, devoted to the specialties of the E. H. Pease Manufacturing Company of Racine, Wis. Indeed, their advertisements are sufficiently prominent to insure the attention of those who are at all interested in the machinery of grain handling. And we may be pardoned if we call attention to the remarkable progress which this firm has made in the past few years. Since its organization four years ago, it has been steadily growing, both in the volume of its business and in public estimation. Last year its patronage increased fully 50 per cent. Within a year its working capital has increased fully 100 per cent. and it is in the field for 1891 with its "war paint" on, and in stronger shape than ever to give the best service to its patrons. And these, by the way, include many of the most important architects, contractors and builders of grain elevators and many of the largest grain operators in this country, Russia, South America and Australia. The company has earned its success; and it is a credit to its sagacity that it has always advertised judiciously. And it is no small credit to the business sagacity of any firm to know when, how and where to advertise.

ADVERTISERS are beginning to realize that there is a right way of advertising as well as of doing anything else, and that the fruitless advertisements are by far more numerous than the fruitful ones. The best, surest, quickest and cheapest way to get reliable information on how to advertise, when to advertise and where to advertise to secure the best results, is to peruse *Printers' Ink*, a well-printed, neat little weekly journal for advertisers, published by Geo. P. Rowell & Co., New York. Each issue contains not only articles, giving much valuable information on the art of advertising, by men who have given years of study to the subject, but also the well prepared advertisements of those who are in the advertising business, so that one cannot look through a copy of the journal without gaining valuable information on a subject of prime importance to all business houses. Each copy is worth the price of a year's subscription—two dollars.

FARMERS are forming a number of trusts in different parts of the country and will soon be able to control the grain markets of the country, or at least many of them think they will. We hope they will get their full of the trust business. If any of our readers know of a farmer who is anxious to join a trust we would suggest that they recommend the Farmers' National Trust. E. Raymond Campbell of Austin, Minn., is secretary. By forming auxiliary societies and sending the secretary 25 cents apiece the farmers can, upon signing the following agreement, become members of the trust: "We, the undersigned members of Sub-Trust of Farmers' National Trust No. — (leave number blank), do hereby solemnly promise and agree each with the other and with the executive committee of the Farmers' National Trust, that we will at all times obey all orders of the executive committee of the Farmers' National Trust, which fix the prices of farm products; that we will not sell at less than the prices so fixed, unless absolutely forced to do so by circumstances which we can neither by any means within our power escape from, or control. To the faithful performance of these promises we pledge our honor as members and co-workers."

Grain Dealers' Associations.

KANSAS AND NEBRASKA GRAIN DEALERS' ELEVATOR ASSOCIATION.

President, MASON GREGG, Lincoln, Neb.; *Vice-President*, FRANK LOWER, Council Grove, Kan.; *Secretary*, W. T. CAYWOOD, Clifton, Kan.; *Treasurer*, O. A. COOPER, Humboldt, Neb.

GRAIN SHIPPERS' ASSOCIATION OF NORTH-WEST IOWA.

President, T. M. C. LOGAN, River Sioux; *Vice-President*, H. HANSON, Odebolt; *Secretary and Treasurer*, F. D. BABCOCK, Ida Grove; *Assistant Secretary*, F. G. BUTLER, Schaller.

Executive Committee, E. A. ABBOTT, Des Moines; J. Y. CAMPFIELD, Sac City, and T. M. CATHCART, Kingsley.

GRAIN DEALERS' ASSOCIATION OF OHIO.

President, J. W. McCORD, Columbus, Ohio; *Vice-President*, L. BOGGS, Kingston; *Secretary*, E. C. WAGNER, Columbus; *Treasurer*, D. McALLISTER, Columbus.

Board of Managers, C. D. MILLER, Newark; DILL WEIGAND, South Bloomfield; E. M. BENNETT, JR., Urbana; C. W. PRINGLE, Lilly Chapel, and H. CHAMBERS, Worthington.

Legislative Committee, J. W. McCORD, D. McALLISTER, E. C. WAGNER, W. A. HARDESTY, and E. C. BEACHALL.

ILLINOIS GRAIN MERCHANTS' INSURANCE AND PROTECTIVE SOCIETY.

President, ISAAC VAN ORDSTRAND, Hawarden; *Secretary and General Manager*, S. K. MARSTON, Onarga; *Vice-President*, JOHN STEWART; *Treasurer*, G. C. McFADDEN, Havana.

Executive Committee, S. K. MARSTON, D. H. CURRY and F. M. PRATT.

Committee on Claims, D. M. BRUNER, J. F. ZAHN, H. C. MOWREY.

Committee on Legislation, W. ARMINGTON, V. R. ST. JOHN, C. C. ALDRICH.

EDITORIAL MENTION

SEND us items of interest to the trade.

SHALL Chicago accept seaboard weights of grain? That is one of the leading questions just now.

G. W. CRANE, manufacturer and dealer in mill and elevator supplies of Minneapolis, has been succeeded by G. W. Crane & Co.

EVERY shipper should read "Observer's" article on "Difference in Weights." He gives a good explanation of how many shortages occur.

SUPPORT and read that journal which is published in the interest of your business, and thereby realize a greater profit than any one else concerned.

READERS will confer a favor by making use of our "Queries and Replies" department. If you do not seek information reply to the queries of those who do.

ANOTHER decline in ocean freights and grain will be taken to Liverpool for ballast. The rate from New York is one cent and from Baltimore one-half cent per bushel.

S. H. McCREA, who died the past week, shipped the first consignment of grain ever received in Chicago. He lived to see great things accomplished at Chicago in the grain trade.

THE jumbo car scale is a great improvement over the old hand shovel method of transferring grain from one car to another car. Little grain is lost, much time is saved. Railroad companies should be compelled to do away with the old

hand shovel method of transferring grain at junctions and terminal points, or else make good to shippers the loss suffered by its continuance.

MR. ROBINSON of Simpson & Robinson, Minneapolis, made us a pleasant visit the past month. The past year's business of the firm was eminently satisfactory, and the prospects for the future are bright.

THE inspector of grain for the Boston Chamber of Commerce was suspended recently. He had the disposal of the samples retained from the inspection of grain, and his disposition of them was not satisfactory to the directors, so they suspended him.

IF some one will devise a new scheme for meddling with the inspection of grain, or draft a bill that provides for a new kind of interference with the grain business, they will confer a great favor upon many members of state legislatures. The farmers must be pleased.

TO SUCCESSFULLY carry on the business of a grain shipper, make sure that your cars are well cleaned and all the holes and cracks covered before loading them, and by all means do not fail to subscribe for and read the AMERICAN ELEVATOR AND GRAIN TRADE, only \$1 per year.

GOVERNOR FIFER has appointed the following gentlemen to constitute the Illinois Board of Railroad and Warehouse Commissioners: John R. Wheeler, I. N. Phillips and John R. Tanner. The only change from the old board is the appointment of Mr. Tanner in the place of W. M. Crim.

THE Minnesota Railroad and Warehouse Commission has been asked to order the Minnesota Southern Railway Company to construct a track to the grain warehouse of W. F. Myers at Wells. It would seem that self-interest would prompt the company to do all in its power to encourage shipments.

A BILL has been introduced in the Minnesota Legislature providing that public elevators, warehouses and their contents shall be taxable as personal property. Will Minnesota have any public elevators if this bill becomes a law? Elevator men can protect themselves in more than one way from the injurious effects of odious laws.

THE bucket shops are still flourishing, right under the nose of the Chicago Board of Trade. President Baker was re-elected to the presidency of the Board on the platform of death to the bucket shops; but they still flourish, and what is more, seem to have no trouble whatever in promptly getting the quotations of the big Board.

GRAIN shoveled from one car to another during a rain or snow storm is very likely to arrive at its destination in a damaged condition. At a number of terminals and railway junctions grain is transferred this way. Shippers should insist on the erection of transfer houses, so that their grain can be correctly weighed and safely and carefully transferred.

IF you want help, a situation, a location, a partner, an elevator, machinery, or anything else, put an advertisement in our want column. If you have an elevator or machinery to sell, advertise it in our for sale column. No other journal is devoted exclusively to the elevator and grain trade. No other journal reaches all the members of this trade.

IT is reported that Chief Grain Inspector Clausen of Minnesota has stated that out of 7,000 calls for re-inspection of cars of grain at Minneapolis, St. Paul and Duluth 3,000 were raised in grade and 116 lowered. The large number of changes from the original inspection and especially the great number of cases in which the inspection was raised, will be somewhat of a sur-

prise to many of the dealers shipping to Minnesota markets and will undoubtedly encourage them to appeal oftener when they think the grading is too low.

THE motion for a new trial for Stephen F. Sherman of Buffalo, who was recently sentenced to five years' imprisonment in the state penitentiary for the mismanagement of a Buffalo elevator, has been denied. Mr. Sherman is still at large.

A BILL has been introduced in the Minnesota Legislature to make every person liable for all damages sustained by any one in consequence of dangerous or defective machinery used in or about the business carried on by such person. The Minnesota Legislature should have a care lest it catch the fever for passing unconstitutional laws.

THE most prolific source of fires in a grain elevator is the elevator head. Watch the elevator heads closely and keep the bearings well oiled. In steam power elevators where slack coal is used, fires are frequently caused by spontaneous combustion. Slack coal should be kept dry and, if possible, it should be so placed that it can burn up without setting fire to the boiler house.

CHICAGO builders have a committee at Springfield working for the repeal of the lien law. Are Illinois grain dealers working for the repeal or amendment of the landlord lien law, which causes so many of them to suffer? If dealers do not want their business interfered with by the meddling state legislatures they must organize and be prepared to fight the passage of objectionable bills.

AMONG the laws passed by the North Dakota Legislature so far this season, which have a bearing upon the grain trade, are the following: One permitting the shipment of stock and grain in the same car, one providing for the erection of warehouses on railroad right of way, and one regulating public warehouses. However, the constitutionality of the laws has not yet been tested.

THE Indiana Legislature has passed a bill providing that where a price is agreed upon between a shipper and a railroad company on a through shipment of freight no further charge shall be made. The bill was amended so as to provide that it should not interfere with railroad companies making and enforcing rules for the prompt loading and unloading of cars and the collection of demurrage charges.

"LATE LETTERS" is the title of a neat little pamphlet of twenty pages issued by the Charter Gas Engine Company of Sterling, Ill., and showing what users think of the "Charter" for dozens of purposes. The "Charter" is the only engine that uses gasoline direct from the tank; and if you want to see how "pat" such an engine comes in for use in mills, elevators, etc., just send for a copy of "Late Letters."

ROCHESTER millers are still complaining bitterly of shortages in cars loaded with wheat at Buffalo elevators, and they accuse the elevator men of stealing it, and the elevator men account for the shortage by saying the cars leak. If Buffalo elevator men will persist in loading cars before stopping up the cracks and holes, they should make good the loss. The cars, it seems, only leak while at Buffalo, never at Rochester.

THE Missouri Legislature has appointed a committee to investigate the state grain inspection department. The complaints of mismanagement and improper grading have been frequent and loud and it was high time something was done in regard to the matter. If the complaints have no foundation in fact then the public should know it. The fee for inspection, which was increased to 40 cents per car when the state took charge of the inspection, will probably be reduced

to 25 cents per car. To permit of this, the inspection force and the salaries of those retained will be reduced.

WE are sorry to learn that owing to the continued illness of Mr. Carruth, the firm of Carruth & Stuart of Boston, Mass., are closing up their grain commission business.

WE direct the attention of readers to the advertisement in this issue of the Sykes Iron and Steel Roofing Company of Chicago. Owners of elevators and other buildings will find the Sykes Company well equipped to supply all demands.

OFFICIALS of railroads terminating at Kansas City are talking of establishing a joint agency at that city to handle all the grain arriving at and shipped from the city. This may facilitate shipments, but the agents will fight for freight and cut rates just as much as ever.

THE Pennsylvania Railroad Company has given notice that hereafter the charge for receiving, weighing, unloading and storing grain for the first ten days at the company's grain depot in Philadelphia will be one-half cent per bushel and three-eighths of a cent for each subsequent ten days. This is for grain stored in the local terminal.

READERS will notice in this issue the card of J. A. Campbell & Son of Lincoln, Neb., designers and builders of grain elevators. Mr. J. A. Campbell, who has had over thirty years' experience in the business and is one of the pioneer elevator builders of the country, has associated his son, Mr. Clyde T. Campbell, in business with him. The new firm has our best wishes for that continued success which its experience and skill deserve.

JAMES W. SYKES, the public warehouseman of Chicago, who Chicago banks have been trying for several years to send to the penitentiary for fraudulently issuing warehouse receipts, have so far failed and recently several indictments against him have been quashed upon technicalities. Mr. Sykes has been convicted several times, but each time has been granted a new trial upon some trivial technicality. The law is all right, but it is very difficult to enforce it.

THERE has been quite a crop of "squealers" lately in Chicago courts against commission merchants, who have suddenly discovered that option dealing is the worst kind of gambling. One of the successful kickers is a North Dakota woman who, after toying with the ticker, became convinced that she was gambling, and sued to recover the amount of her losses. There is nothing like a good round loss on the Board of Trade to quicken the conscience of some people.

THE railway companies entering Montreal have increased the storage rates on grain from one-half to three-fourths of a cent per bushel. They claim that the low rate was given to stimulate business, but as the reduction did not have this effect they must advance the rates. The Montreal Corn Exchange, however, is opposed to the advance and will do all in its power to have the order rescinded or grain delivered free on track. One-half cent per bushel is enough and the railroads should be satisfied with it.

THE needy farmers of Brown county, S. Dak., will be supplied with seed grain by the elevator companies. The county commissioners have perfected an arrangement whereby five or more responsible farmers in each township will guarantee that the seed furnished will be properly sown, the crop harvested and the elevator men paid. A new way is devised every year for securing the elevator men against loss for seed grain supplied farmers because the security given the preceding years did not secure them. Little of the seed grain furnished the farmers of the Northwest by the elevator companies has been paid for or returned, but the

elevator companies are generous enough to continue to supply them. If some one will suggest a security that will secure a great favor will have been done the elevator men.

THAT part of the Railroad and Warehouse Law relating to the grain inspectors has been amended so as to provide that the chief inspector will promptly refund to the railroad and warehouse commission of the state of Illinois any and all moneys said commission may pay to any person, firm or corporation upon account of any claim or damages arising from any neglect, refusal or failure to discharge his duties as required by law. We give elsewhere in this issue that part of the law relating to inspectors as amended.

THE associated Southwestern lines have adopted a resolution to the effect "that the maximum charge to be paid for the transfer of grain at Southwestern Missouri River points be fixed at \$1.50 for any sized car and that this charge be allowed only upon grain ordered transferred by the railroad companies; that the charge be computed on the cars received from the West. For example: In the event that a large car be transferred into two small cars, \$1.50 only be allowed; that in the event any line desires to do its own transferring they are at liberty so to do."

GRAIN dealers of Minnesota will be pleased to hear that the Minnesota Farmers' Alliance propose to send "a reliable, shrewd man to England to investigate the grain markets and arrange with some responsible English house for direct shipments of wheat from the primary markets of Minnesota to Liverpool." It is to be hoped that some of them will try this for at least one season, so that they may realize the gigantic profits which the exporters make, or rather the gigantic profits which they accuse them of making. The scheme, if tried, will surely end as did the Alliance Elevator Company.

A MILWAUKEE gentleman raises the query as to the reliability of *Bradstreet's* reports of the grain in sight. He instances the report of last January when *Bradstreet's* credited Milwaukee as having 600,000 bushels of wheat stored in private elevators. Half of this, he says, was credited to a single miller whose entire storage capacity does not exceed 40,000 bushels. As to the report of March 1, which locates 400,000 bushels of wheat in private hands in Milwaukee, the correspondent believes that half that amount would be an ample figure. It is certainly difficult to reach the amount of grain in private hands, for very obvious reasons.

THE North Dakota Legislature is a trifle wiser than it was a year ago, but it still contains many members who wish to make business unprofitable and undesirable for the elevator men of that state. Instead of passing laws against the elevator men and having the attorney-general pronounce them unconstitutional when it was found that they would inflict greater injury to the farmers than any one else, the warehouse commission has taken to submitting the bills against elevator men to the attorney-general for his opinion as to their constitutionality before reporting them to the house. They should also consult the elevator men and learn if they will continue in business if the proposed laws are enacted.

MISSOURI's grain inspection department is proving to be a paying investment for the state. According to the report of the State Warehouse Commission, the receipts last year amounted to \$50,087, expenditures, \$47,122. The cost per bushel of inspecting grain is always more the first year than for succeeding years, so the state can depend upon clearing more hereafter unless its politicians succeed in making enough sinecure offices to absorb the surplus. The receipts at the three inspection points, St. Louis, Kansas City and St. Joseph, aggregated 77,968 cars, 606,378 sacks and 225,453 bushels of bulk grain in canal boats. The

grain arriving in canal boats was from Illinois. Of that arriving in cars, 65,147 cars were from without the state. The Missouri grain inspected included only 12,821 cars and 503,300 sacks of grain.

THE attorney-general has made a motion in the United States Supreme Court at Washington to advance for argument the case of Charles Conshnan of Chicago, who is in custody for refusing to answer certain questions in the investigation of the workings of the Inter-State Commerce Law. Pending the decision of the supreme court it will be impossible to continue the investigation of the violations of the Inter-State Commerce Law. The law is enforced where it is to the advantage of the railroad companies to have it enforced.

THE Board of Directors of the Philadelphia Commercial Exchange in its annual report to the members says, "It is a fact of special significance as an evidence of the ability of Philadelphia grain merchants to handle a large business, and of the satisfactory working of the inspection system of this Exchange, that the largely increased foreign trade in corn above noted has been accomplished without a single complaint from Europe concerning the condition or quality of grain shipped from Philadelphia." This is a merited compliment to Philadelphia's chief grain inspector, John O. Foering. Inspectors who are the mere tools of speculators, that willingly sacrifice the country's export grain trade for their own interest, cannot be expected to give satisfaction.

A LAW has been enacted by the North Dakota legislature fixing the rate for receiving, elevating, insuring, delivering and 20 days' storage of grain at 2 cents per bushel. The storage rate after the first 20 days shall be $\frac{1}{2}$ cent per bushel for each 15 days or part thereof, but shall not exceed 5 cents per bushel for six months' storage. The elevator companies maintain that it costs them nearly 3 cents per bushel to handle the grain, therefore they cannot afford to operate as public houses at the legal rate. Many of the elevator men who were forced to go out of the public warehouse business and operate as private have continued to operate as private houses ever since, although the many laws regarding elevator men passed by the last legislature have not been enforced. Legislators of other states should profit by the experience of those of North Dakota.

As was anticipated, the National Transportation Association at its Cincinnati meeting decided in favor of uniform bills of lading, and passed resolutions memorializing Congress to take measures to compel carriers of the United States to furnish all shippers a uniform bill of lading, in which the common law liability of such carriers shall be expressed. The association also asked that uniform classification be established, the rules and conditions whereof shall be just and reasonable. The establishment of uniformity in bills of lading and classifications will greatly simplify matters, and in a great measure prevent injustice to shippers and misunderstandings and trouble between shipper and carrier. These two reforms are of vital importance to grain shippers, and whenever they get the opportunity they should speak in favor of them.

R. W. Austin of Modesto, Cal., shot a squirrel recently that had 1,020 grains of wheat stowed away in the pouches of its cheeks. It was a very small squirrel.

Only one appeal was taken from the grading of Mr. D. Horn, Winnipeg's chief grain inspector, last year, and in that case the grading of the inspector was sustained.

W. P. Gale of Rosalia, Wash., had a 13-acre field of wheat last year that produced 42 $\frac{1}{2}$ bushels. He also threshed eight acres of oats which yielded 92 bushels per acre.

New York exported 61,381 bags of clover seed from Sept. 1 to Feb. 28, against 66,942 bags in the same period of 1889-90. In the same time Baltimore exported 144,501 bushels.

DIFFERENCE IN WEIGHTS.

BY OBSERVER.

It would be difficult to find an accountant who has not often puzzled his brain for some reasonable theory as to "how he did it," when he has discovered some stupid blunder in his figures. We all know how easy it is to transpose figures—to read 45,950 when we meant to have read 49,550. This kind of error is of a quite common sort, and we all make them. But when we carry over 30,420 instead of 40,420, we are apt to say some pretty hard things of ourselves, especially if we have had to check a long time before our stupidity comes to the surface. The question may be asked, after looking over the following tables, "How can men make such reckless blunders?" The answer is, easy enough, that they are not thinking of what they are doing.

There is a decided difference, from a psychological point of view, between errors made in computing, and errors made in reading figures. Computation requires undivided attention. One cannot add a long column of figures without more or less concentration of attention. His attention must be fixed; whereas in reading figures the process seems to require but a superficial action of the mind. Some accountants can easily read aloud long columns of figures without a single error, and all the time have their mind riveted on some other matter. On the other hand I have had experience with clerks in my office who could rarely read off a column of figures the length of a journal page without transposing or distorting them in one way or another. My observation is that one who has many figures to read soon gets into the way of doing it mechanically.

Before the check system came into use in our elevators, I noticed that new weighman would check back their entries over and over again before they felt sure enough of their figures to change the scale. But this feeling of uncertainty would soon wear away and in a short time one look at the scale beam was enough. A curious thing came to light after the adoption of the check system. We had one weighman who always seemed to be extremely careful. When, in looking up a disputed weight, it was found that the car had been weighed by James, that settled it. We felt sure the shipper was off. Much to our surprise the check developed the fact that James made more mistakes than the other two put together.

The following table of errors is evidence enough, I think, that the time is ripe for the adoption by elevator companies and grain shippers of some device or another for obtaining a correct record. The belief is pretty general, perhaps, that "weighmen sometimes make mistakes in this way," but you will rarely find elevator people who are willing to admit "this way" is any considerable factor in the question. Their experience is carefully kept to themselves. They know that much of the short weight trouble has been chargeable to this defect. On the other hand the shippers who have been sufferers cling tenaciously to the robbery theory. Why are not the elevator companies sufferers also? The following table does not make it apparent that they can afford to be quite indifferent. But reasoning from the point of view of fairly uniform results of annual invoices, the elevator companies would never have suspected that a faulty record was half as big a factor as it really is. However, in comparison with individual shippers, the shoe has never pinched the elevator companies, and you will find, perhaps, a shipper now and then who is not sorry that errors have been made in this way. But those who are sorry, most likely have pretty strong convictions that some one else is not sorry, at their expense.

We notice that a general weighmaster at one of our principal lake ports once a year points with pride, we presume, to the fact that in weighing so and so many millions of bushels, the average shortage is so and so, a mere trifle, less than a peck to every 1,000 bushels. Which is all very pleasant and soothing to everybody but the vesselmen, who have had to pay for 25 to 500 bushel shortages. The average is all right so far as the elevators are concerned, but the individual shorts are the true mourners.

In the following table the column headed "Weighman's Record" shows the weighman's original figures, the second column the figures as they should be, as ascertained by the check system. In a few instances it was possible to ascertain the shipper's actual weight, which is shown in the last column. By comparing the corrected weight with the shipper's weight one can see at a glance what would

have been the difference if our weighman's figures had not been subject to proof.

	Weighman's Record.	Corrected to.	Amount of Error	Correction in favor of.	Shipper's Weight.
	38,300	39,300	1,000	Shipper	
	38,100	39,100	1,000	Shipper	
(a) ..	30,450	38,450	8,000	Shipper	38,460
	46,570	47,570	1,000	Shipper	
	32,930	32,400	530	Elevator	
(b) ..	35,400	33,400	2,000	Elevator	
(c) ..	30,420	30,020	400	Elevator	
(d) ..	37,750	37,250	500	Elevator	
	43,730	43,230	500	Elevator	
	42,530	41,530	1,000	Elevator	
	36,070	36,570	500	Shipper	
	31,200	30,200	1,000	Elevator	
	29,880	29,380	500	Elevator	
	37,780	36,780	1,000	Elevator	
	28,910	29,910	1,000	Shipper	
	39,850	39,850	500	Shipper	
	20,870	21,870	1,000	Shipper	21,890
(e) ..	39,750	41,750	2,000	Shipper	
(f) ..	27,570	30,570	3,000	Shipper	
	54,840	46,840	8,000	Elevator	
(g) ..	49,600	39,600	10,000	Elevator	
(h) ..	28,660	26,660	2,000	Elevator	
	34,800	33,800	1,000	Elevator	
	28,080	28,580	500	Shipper	
(i) ..	47,470	44,740	2,730	Elevator	
	42,700	42,200	500	Elevator	
	35,000	34,000	1,000	Elevator	34,180
	28,180	29,180	1,000	Shipper	
	29,630	28,630	1,000	Elevator	
	39,390	38,390	1,000	Elevator	
(k) ..	38,420	33,420	5,000	Elevator	
	39,900	39,400	500	Elevator	
(l) ..	37,870	31,870	6,000	Elevator	31,915
(m) ..	50,210	52,210	2,000	Shipper	
	32,940	31,940	1,000	Elevator	
	49,300	49,800	500	Shipper	
	45,490	45,990	500	Shipper	
	32,970	32,470	500	Elevator	
	32,070	32,570	500	Shipper	
	58,360	48,360	10,000	Elevator	
	51,200	51,700	500	Shipper	
	39,720	38,720	1,000	Elevator	
	31,730	30,730	1,000	Elevator	
	43,180	42,180	1,000	Elevator	
	30,810	30,310	500	Elevator	
	35,090	36,090	910	Shipper	
	48,160	48,660	500	Shipper	
	48,290	48,790	500	Shipper	
	49,490	49,990	500	Shipper	
	44,810	36,810	8,000	Elevator	36,905
	40,270	40,770	500	Shipper	40,850
	36,030	36,530	500	Shipper	
	36,410	36,910	500	Shipper	
(n) ..	38,070	38,570	500	Shipper	
	40,600	45,600	5,000	Shipper	
	37,330	37,830	500	Shipper	
	44,710	45,710	1,000	Shipper	
	39,000	39,500	500	Shipper	
	26,900	28,900	2,000	Shipper	28,940
	28,600	29,600	1,000	Shipper	
	34,310	34,810	500	Shipper	
	30,600	31,600	1,000	Elevator	31,595
	28,300	29,300	1,000	Elevator	29,340
	29,720	28,720	1,000	Elevator	28,920
	44,710	34,710	10,000	Elevator	
	32,380	31,380	1,000	Elevator	
	30,500	29,500	1,000	Elevator	29,050
	28,840	29,840	1,000	Shipper	

Surmisings as to how they did it:

(a) In this case the weighman, after counting off his 450 on the beam, took a hasty glance at the figures 38,000 and wrote the whole amount down at once, mistaking 38 for 30. Perhaps the middle portion of the "8" was indistinct.

(b) Here a dusty "3" was mistaken for a "5."

(c) Too hard.

(d) Part of our grain was weighed on a track scale having 500 pound notches on the main beam where the weight was indicated by 37,000 in figures, the extra notch counting 500. The small beam showed 250. In reading the whole amount off both beams (as experienced weighmen are apt to do) the odd 500 notch, under which there are no figures, was dropped out, to be put back in again by the check system.

(e) No theory for this except constitutional absentmindedness. The figures were, perhaps, read off the beam correctly, but were distorted by a vacant state of the mind in which other figures already recorded in his weighbook engaged the small portion of his mind which was still occupied with his work.

(f) and (g) Same as (e).

(h) Same as (b).

(i) Transposition.

(k) A "3" mistaken for an "8."

(l) A "1" mistaken for a "7."

(m) Here is an interesting error. Every accountant will take in the situation when he understands that the 50,000 was read at one point and the 250 at another. Now, if the man had first set down his 50 and then gone to the other point for his 250, the entry would most likely have been correct. But like most of the "experienced" he reads fifty (drawing the 50 in his mind from this point to the 250) two (then counting the odd notches) fifty—two fifty. Then having the connection of 50 with 2 still in

mind, he writes fifty—two two fifty=52,250. Go to a scale and try it and see how easy it is.

(n) Another example of the evil of reading off the whole amount before making any part of the entry. Here 40,000 stood at one point and 600 at the other. In getting his 600 he read first 500; then, the extra 100 being represented by notches or separate figures, he reads thus, putting the whole weight together as usual: Forty—five—six hundred, and sets it down forty-five six hundred (45,600). A summary of the above shows the following:

Total amount of errors in pounds.....113,070
Errors in favor of elevators,
Corrections in favor of shippers 39,410
Errors in favor of shippers,
Corrections in favor of elevators 73,660

Of course this summary is of no practical value. If I should give details as to the number of cars handled, the time during which the errors were made, and should show that during one or two seasons the errors committed were in favor of the elevators, or any other item in the way of analysis, there would remain but one practical point after all, and that point is just this: "A great many errors are made, and errors are just as liable to be in favor of the shipper as in favor of the elevator, and vice versa. After looking over these figures to what sane man will not this query present itself: If weighmen, knowing that they have been suspected of making mistakes, knowing that the prime object of the double entry system was to detect their mistakes; knowing that their every mistake was certain to be detected and fastened onto them, should, notwithstanding, make so many and such stupid and stupendous errors, how many more errors must they have made when there was no possible way of detecting them. Has anybody got an answer to this problem? I think not.

I will say in regard to the above summary that for months the total of errors would be in favor of the company, then there would turn up a number of small errors and a good big one, perhaps, that would throw the credit on the other side. The above table does not include errors less than 500 pounds, of which there were a great many. I intended in this paper to give some *prima facie* evidence showing that shippers were making right along the same kind of errors that our men were making; but this paper is already too long, and I shall have to defer the exposition of this side of the question to some future time.

I believe with the editor of this journal that the only way to correct this evil of careless weighing is for those who are short, or over either, to make the shortage known, and if worse comes to worse, to make it known at what point the shortage occurs. But let those who have complaints to make be very careful to have the best possible evidence that they have not themselves made the errors. With absolutely correct scales, and they can be had, there is no good reason why a carload of grain should not weigh out within twenty pounds of the amount weighed in. And if it were necessary to substantiate this statement I could a tale unfold that would do it. Fifteen years' observation by one who is inclined to observe, and has the best of opportunities for observing, should not be for naught. In my elevator experience I have had just cause for impatience with the conservatism (?) and indifference of those who might have done much long ago to remedy, in a great measure, this parasite of short weights. I propose now to follow the advice of the AMERICAN ELEVATOR AND GRAIN TRADE and give to the public the benefit of my experience and observation in so far as this does not conflict with matters which may consistently be held to be private.

In my next paper I will endeavor to make it plain "How Shippers Make Mistakes," and in others to follow will discuss the questions of Railroad Weighing, with some evidence as to how it is done, and Old Weighing Machines vs. the New, with some table of figures, and lastly a short paper on the Indifference of Managers, and the Why.

A new method of producing artificial fuel consists in the mixing of ground corn stalks and spades with coarse prairie grass. The mixture is made into a coarse dough by means of water and vigorous stirring up. The dough is then put into proper molds and exposed to an even drying process under high pressure. Hereby pieces are produced in the form and size of briquettes which look green gray. These stones, when thoroughly dry, are sold as fuel. They give greater and cheaper heat than bituminous coal, and are besides from 20 to 25 per cent. cheaper.—*Northwestern, Oshkosh, Wis.*

SAMPLING AND GRADING FLAX-SEED AT CHICAGO.

The flaxseed inspection department of Chicago is entirely separate from the grain inspection department which is under state control. The Chicago Board of Trade has charge of flaxseed inspection and it fixes the grades and appoints the inspector. The flaxseed inspection department was established in 1881, and early in 1883 Mr. S. H. Stevens, who had charge of the Chicago Board of Trade's grain inspection department when grain inspection was first established in this country, was called upon to take charge of the flaxseed inspection department. Mr. Stevens accepted and has since been chief flax inspector for Chicago.

The force of the flaxseed inspection department varies from 10, during periods of light receipts, to 25 during the busy periods, this includes three clerks, samplers and expert graders and analyzers. All men commence as assistants and work up. The Board of Trade has provided a committee on appeals to which a shipper or consignee can appeal from the grading of the inspectors, but this is very seldom done. Only one appeal was made last year and then the grading was sustained. No grading of the flaxseed inspectors has been changed by the committee of appeals for over six years.

Mr. Stevens is a very conscientious worker and aims to secure equal and exact justice to all. In one of his recent reports he gives the following excellent maxims: "Financial responsibility is an indispensable adjunct to inspection." "When inspection ceases to be synonymous with protection, it has failed of its object." Mr. Stevens practices what he preaches and if any one suffers loss by his mistake in grading he will make good the loss so caused.

In one of his recent reports Inspector Stevens says: The equipment of a flaxseed inspector when inspecting bulk seed on track consists of a geared screw sampler or trier, the invention of Mr. Stevens; a cunningly devised ear-opener, combining bar, jimmy, tack-hammer and stirrup; a canvas about eighteen inches square; a supply of three pounds capacity, stout cotton sample bags; a leather strap one and one-half inches wide and four feet long with a heavy buckle together with strings and tags. He has also a list which a trusted railroad clerk has prepared (for a consideration) of the numbers, initials and consignees of all cars of flaxseed received since the day before. This latter arrangement was perfected that nothing might prevent the inspector being on the tracks at 7 A. M. and ready for work, and that errors may be reduced to the minimum.

The entrance to car is gained by the use of car openers variously applied. The car of flaxseed is divided by the inspector by imaginary lines into seven equal parts, and a sample taken from each, thus: The sampler is placed upright on top of seed; the crank is then turned regularly and a downward pressure applied. The sampler passes down through the seed and takes up inside of the tube an equal portion of each stratum between top and bottom. The canvas is spread under the spout of sampler and the crank turned rapidly until the sample is all thrown out on the canvas, and after mixing one-seventh of a sample bag is filled. The circuit of car is made, and seven times the sampler goes from top to bottom and seven equal and average samples are placed in sample bag, which is now tied and a tag attached. The tag sets forth the date, number and initial of car, railroad, consignee, grade and such other memorandum as is hereinafter set forth, and name of inspector. A duplicate is tacked to the grain door of car, and the facts entered in a book carried for that purpose. Should the car have been unevenly loaded, either as to quality, condition or impurity, so as to cause a doubt as to the correctness of the sample secured in the usual way, then he takes such other samples as he deems necessary. Should there be evidences of attempted fraud in loading car by putting impurity or inferior seed in angles and crannies of car, the inspector does not inflict a penalty on the offender, but tries to make *right sure* that he (the offender) will not secure the prize of fraud. Should the car be too full, or the bulk seed covered with bags as to prevent an average sample being taken, the inspector procures the best sample possible, and reports that it is not an average, and the reason why. The number and initial of car is always taken from side, never from door or inside of car, for the reason that doors are sometimes exchanged and cars given new numbers without changing them on the inside. Care is taken that two samples are not without tags at the same time, as their identity might be lost, and thereby a sample receive a wrong tag. To guard against mistakes the number and initial are also placed on front and back of tag, and carefully compared with number and initial on car. A complete finish of car is effected before any other work is commenced. One man inspects but four cars an hour.

Grade is determined as sample is being taken. Grading brings into action all the senses. Feeling, smell and sight are the most positive. Taste and bearing are assistants.

Solubility is the cause of the extreme sensitiveness of flaxseed to the action of water, as from its contact can be traced nearly all the imperfections to which it is subject. Therefore when engaged in grading, the acumen of the inspector is chiefly exercised in detection of the presence of moisture, and to decide the degree of damage sustained by previous contact. Dampness causes compactness in flaxseed in bulk, so in treading over or through it in car, or in passing the sampler to the bottom in taking sample, the inspector gains some knowledge of its condition. But nothing is left to hints or pointers. Each sample (as drawn) is examined by touch and smell, if then doubt exists, a small portion of seed is placed in the mouth and slowly chewed. This action is decisive and final as to the presence of moisture. While the average person's perceptive faculties might fail to interpret the sensation imparted by touch of hand or tooth, the expert finds proof infallible as to the condition of the seed. Flaxseed being in this market essentially a commercial commodity, storage in quantities is a necessity. With this in view the inspector must take cognizance of the fact that dampness contains constituents of decay; that storage in mass accelerates decomposition, and that infection is transmitted to sound seed by contact, and govern himself accordingly. A perfect seed is inodorous, therefore smell is foreign. Mustiness in flaxseed proves the presence of active or checked decomposition. The sense of smell being more distinct, positive and retentive than

any other, can be relied on to detect it. No sample has been properly examined until the nose has passed on it. A very small quantity of well-defined rejected seed is sometimes found in a car of No. 1, and yet it is graded No. 1. There is sometimes "no grade" seed in a car otherwise No. 1, in such a case it is graded "rejected," provided the no grade seed is not warm. *Therefore the lowest grade found in a car does not govern.* Should the grade of car be other than No. 1, and the average sample does not carry with it positive evidence that the seed is properly graded, then a special sample is taken (and properly tagged) of the part which governed the grade, that the chief inspector and consignee may be fully advised.

Should the seed have become wet from open door, window, or leaky car roof so as to change the grade, a remark is made as to cause of grade, and what would have been the grade in absence of cause. Should snow be found in car of seed in quantity to affect grade, the car is not entered until snow is removed by railroad employees. Provided after removal the snow is so intermixed as to change grade, a similar note is made, as in case of wet. Should car be wasting seed a note is made of it. Railroad officials are notified of all matters where responsibility to them is liable to attach.

From maturity until housed is the critical time with the flaxseed crop. Should rains intervene its susceptibility to dissolve causes decrease in weight and a depreciation in value. Seed thus injured may become dry prior to threshing without mustiness but will be dark and rough, and is known as harvest or field-damaged flaxseed. So generally is this damaged seed intermixed, that it is present in all commercial flaxseed. The question has been often asked, "How much of such seed can be intermixed with choice seed, and still be entitled to grade No. 1?" The answer is found in the rules by reading between the lines, viz.: Until the weight is reduced to fifty pounds to the measured bushel, and the practice of mixing when practical is carried nearly to its limit.

From the Northwest there is received a large quantity of bright Russian seed which, for lack of maturity, is deficient in weight. A part being grown on "sod" ripened unevenly; the other, being late, was cut (to avoid frost) when still green.

In grading the above described field-damaged and immature seed, the only question involved is *weight*, and the greater part of cars come under the head of what is known to inspectors as "line cars." The rule is that No. 1 seed shall weigh fifty pounds of cleaned seed to the measured bushel. Rejected seed shall weigh forty-seven pounds. All seed weighing less shall be graded no grade (which in despite of its name practice has forced into a well-defined grade). The inspector examining the above described seed on the track cannot infallibly say, "This seed weighs fifty pounds (No. 1) to the measured bushel," and "That weighs forty-nine and one-half pounds (rejected) to the measured bushel," or that "This sample weighs forty-seven pounds (rejected) to the measured bushel," and "That weighs forty-six and one-half pounds, and is no-grade seed." Notwithstanding the narrow verge he decides according to his best judgment, and places his "X" on the tag, meaning thereby to say, "I am in doubt." The chief inspector carefully clears the sample and appeals to the unerring scales, and the decision of the sub-inspector is sometimes reversed.

From the tag on the sample bag through all the ramifications of the system to the final certificate, the following formula (with the weight per measured bushel set opposite) has been adopted, that the buyer and seller may know at a glance the kind and degree of damage present in car or lot of flaxseed graded rejected.

Field-Damaged.—The words meaneth that the seed is dry, but so intermixed with field-damaged seed as to reduce the weight per measured bushel below fifty pounds.

Light Weight.—Be it known that the seed is bright and dry, but immature.

Musty.—This word alone is evidence that the seed is dry, but has been damp, and perhaps warm. Otherwise No. 1.

Damp.—This single word denotes the presence of moisture. Otherwise the seed would grade No. 1.

Damp and Damaged.—Signifies that the seed is intermixed with either field or storage-damaged seed, together with dampness.

Damp and Sour.—Indicates that the seed is in the first stage of decomposition.

Damp and Musty.—Flaxseed thus described has been warm and not yet dried out.

In grading the last three subdivisions of rejected seed, weight is not considered.

The formula to signify the different conditions of no grade flaxseed is as follows:

Excessive Field-Damage.—Denotes seed that by long exposure to rain has been deprived of much oleaginous matter, but afterward dried and prepared for market. The weight is under forty-six and one-half pounds to the measured bushel.

Wet.—This single word means that if not wet it would be No. 1.

Wet and Musty, and Wet or Damp and Warm.—Denotes seed that would grade No. 1, provided it was not out of condition, as stated.

Wet and Damaged, Wet, Warm and Damaged and Damaged and Musty.—Signifies that if only the damaged condition existed it would grade rejected.

Smoky.—This means it is not mixed with burnt seed.

Burnt seed, tailings, and that in the last stage of decomposition are not inspected.

No inspection is complete until indorsed by the chief inspector, but no remark or note made on tag by sub-inspector is removed or obliterated, but remains through all changes a record of his then opinion.

Every morning a report of the inspection of flaxseed for the preceding day is posted on 'Change. This report shows the number of bushels of each grade received and shipped, the railroad with number and initial of car, test and weight, so that members can easily learn all about the receipts and shipments.

In a future article we will describe how flaxseed is analyzed for commercial purposes.

Two competing transportation lines carry the immense crops raised in the fertile Walla Walla wheat country. The Oregon Railway and Navigation Company's system takes its grain to Portland, Ore., while the Hunt system ships to Tacoma, Wash. Both systems are now sending large quantities east to Minneapolis, the Hunt system over the Northern Pacific and the Oregon Navigation Company by way of the Union Pacific line.

Fires, Casualties, Etc.

Lee Bros.' distillery at New Columbus, Ky., was recently burned. Loss \$15,000.

The Water Pierce Oil Company's cotton-seed oil plant at Newport, Ark., was burned recently.

B. E. Williams, grain dealer at West Troy, N. Y., was stricken with apoplexy Sunday, Feb. 22.

Koniger Bros.' brewery at Ketchum, Idaho, was destroyed by fire Feb. 4. Loss \$10,000; partly insured.

The North Little Rock Cotton-seed Oil Mill at Little Rock, Ark., was burned Feb. 2. Loss about \$250,000.

J. T. O'Rourke & Co., hay and feed dealers at Philadelphia, suffered \$20,000 loss by fire. Insurance \$7,000.

The Brandon & Kirmeyer Brewery at Leavenworth, Kan., was burned March 4. Loss \$12,000; no insurance.

Jacob Keiwell's City Brewery at Menomonie, Wis., was burned at 2 o'clock in the morning of Feb. 15. Loss \$8,000; insurance \$2,000.

An employee of Thomas Dickson, a corn buyer of Oneida, Ia., fled with \$550, which had been intrusted to him for deposit in a bank at Greely.

William Snyder, employed in the elevator at East DuBuque, Ill., had both his legs broken by a cake of ice Feb. 12. The surgeon says he will recover.

The Christensen elevator at Stewart, Minn., was discovered to be burning early in the morning of Feb. 19, but the flames were extinguished without much damage.

William Mitchell, employed in a grain elevator at Halifax, N. S., was caught in the machinery Feb. 13, and crushed to death. He was 40 years of age, and had been married the previous evening.

The starch warehouse of the Peoria Grape Sugar Company at Peoria, Ill., was burned on the night of March 10. The fire also damaged the Pabst Brewing Company's warehouse. Loss \$80,000; insurance \$39,500.

The new wharf and warehouse erected at Lulu Island, near Victoria, B. C., by W. H. London last summer, fell in recently. In the warehouse at the time was a quantity of hay, potatoes and grain, most of which was saved. The loss was about \$1,000.

Thomson & Johnson's elevator at Fisher, Minn., was burned at midnight Feb. 19, together with 15,000 bushels of wheat and 2,500 barrels of flour owned by the Fisher flour mill. Loss \$27,000; insurance \$20,500. The fire is supposed to have been kindled by an incendiary.

John Bacon and Charles Shangraw were taking down a staging from the elevator being built at Richford, Vt., for F. H. Peavy & Co. of Minneapolis, when the staging fell 60 feet, killing Bacon instantly. Shangraw struck the ground with his feet, but received a severe shock.

Johnson Bros., grain dealers at Wilton, Ia., were robbed of some corn Feb. 20, but the thief left a trail of corn which led by a circuitous route to John Hipwell's barn nearby. Hipwell had sent his hired man, Jesse Hanna, to steal the grain. Hanna pleaded guilty and both were sentenced to thirty days in the county jail. Johnson Bros. have frequently suffered from petty thieves.

On Feb. 25 a train of cars on the track in the Union Elevator at Omaha, Neb., was being hauled up the inclined plane to be unloaded, when the rope cable parted. One end of the rope struck Jacob Jensen, a laborer employed in the elevator, and knocked him senseless. He was supposed to be dead, but regained consciousness later, and it was found that three ribs were broken. He will recover in due time.

The Counselman 200,000-bushel grain elevator at Chicago was burned at 10 P. M. Feb. 25, together with 50,000 bushels of wheat. The fire started in the engine room, spread rapidly and gained much headway because of a delay in sending in an alarm. The city fireboats were called, but the shallowness of the water prevented them from getting near enough to be of any service. Loss about \$100,000. Counselman & Co., Board of Trade operators, who were the original owners, had sold out some time ago to other parties.

The murderer of J. B. Flett, the agent of the Northwestern Elevator Company at Arthur, 12 miles north of Casselton, N. D., was apprehended and taken to Duluth, Minn., on Feb. 26. February 11 Flett went to his work as usual. As he failed to return at the usual time search was instituted and his dead body found in the building, shot through the neck. The murderer took his gold watch, \$20, and also \$1,000 of the elevator company's money which it is supposed the dead man had on his person. On the same day Joseph Remington, a young man, had been about the elevator trying to sell wheat that he did not own. He fell under suspicion and was arrested while robbing a stranger by the marshal of Northern Pacific Junction, who noticed his resemblance to a photograph he had of a man who was wanted in Dakota. Flett left a wife and two children.

ELEVATOR

GRAIN NEWS

Brown City, Mich., is to have a flax mill.
A flax mill will be built at Port Sanilac, Mich.
A malt house is being built at Sheboygan, Wis.
Oliver Gregg will build a brewery at Union, Pa.
A grain elevator is talked of at Tottenham, Ont.
C. M. Courad is building a brewery at Erie, Pa.
Gainesville, Tex., is to have a cotton-seed oil mill.
Diehm Bros. will build a brewery in Philadelphia.
A grain elevator is to be built at Fort Worth, Tex.
A cotton seed oil mill will be built at Yoakum, Tex.
Franz Hill is building a brewery at Hamilton, N. J.
John Stocker will build a brewery at Pottstown, Pa.
Ernst Klinkert will put up a brewery at Racine, Wis.
H. P. Hood will build an elevator at Derry Depot, N. H.
Charles Haring will build a brewery at Kearney, Neb.
M. B. Fulghum will build a broom factory at Griffin, Ga.
W. A. Wright will erect a broom factory in Roanoke, Va.
E. P. Merritt & Co. are building a distillery at Elkin, Ky.
Phil Binzel will build a brewery at Bowling Green, Ky.
M. N. Dayton, grain dealer at Aurelia, Ia., has sold out.
Thomas Zoltowski is building a brewery at Detroit, Mich.
Gallon Bros. will build a brewery at Spokane Falls, Wash.
Christian Schanz is about to build a brewery in Philadelphia.
J. W. Planalp, grain dealer at Storm Lake, Ia., has sold out.
S. S. Hackett will start a starch factory at North Woodland, Me.
The Morton Distillery at Kingston, Ont., began operations Feb. 1.
Ib'c & French, grain dealers at Monroe, Ia., have sold their elevator.
The Sioux City (Ia.) Grain and Provision Company has been dissolved.
Pain's Oil and Cotton Company has been incorporated at Austin, Tex.
The Juliaetta Brewing Company will build a brewery at Juliaetta, Idaho.
Hinderberger & Hartman are building a brewery in New York City.
O'Reilly, Skelly & Fogarty are building a brewery at New York City.
E. W. Screven will probably build a rice mill at Charleston, S. C.
Geo. Knowles, grain commission dealer at Milwaukee, Wis., has sold out.
A stock company has been organized to build a brewery at Roanoke, Va.
Orr & Granger, grain dealers at Cincinnati, O., have dissolved partnership.
J. S. Garten & Co., grain dealers at Malden, Ill., have dissolved partnership.
E. R. Hickson has sold his warehouse at Arlington, Ore., to L. G. Hawson.
A 30,000 bushel elevator is to be built at Little York, Ont., at a cost of \$3,000.
W. Maloney, at Calgary, Alberta, is building a grain warehouse at that place.
The Medlin Weiss Beer Brewing Company is building a brewery at Cleveland, O.
Hingston & Wesson, grain dealers at Sioux City, Ia., have dissolved partnership.
W. H. Rowe & Co., grain dealers at New Market, Ia., have dissolved partnership.
The Thos. E. Bagnall Brewing Company will build a brewery at Plattsburg, N. Y.
W. H. Mastin of Colfax, Wash., intends to add a linseed oil mill to his flouring mill.
The Farmers' Elevator enterprise is languishing. Practically no stock is subscribed, and the committee will make no further efforts. John Law is to the fore with a

scheme which will practically meet the case.—*Neepawa (Man.) Register.*

Bolter & Gates have succeeded J. W. Hathaway, elevator owner at Woodland, Mich.

C. D. Franklin, grain and flour dealer at Kingston, Ont., has assigned to R. E. Kent.

Mr. Smith of Galveston will probably build a cotton-seed oil mill at Weatherford, Tex.

The Alliance Elevator Company at Minneapolis, Minn., has assigned to George H. White.

Charles White has bought the grain warehouse of the Maynard estate at Apple River, Ill.

R. K. Johnson, grain dealer and banker at Valparaiso, Neb., has sold his banking business.

Noe & Son, grain and coal dealers at State Center, Ia., have been succeeded by E. E. Noe.

J. A. Leduc & Co., grain and hay dealers at Montreal, Quebec, have dissolved partnership.

Dines & Cleveland have closed their grain warehouse at Niverville, Man., owing to light receipts.

J. W. Miner, dealer in grain, live stock and harness at Dubois, Neb., has closed out his business.

A number of improvements are being made upon the Whitney main elevator at Rochester, N. Y.

The American Brewing Company has been organized at Chattanooga, Tenn., to build a brewery.

Ogilvie's elevator at Pilot Mound, Man., has been closed because very little grain was received.

The Union Brewery Company at Nanaimo, B. C., will build a brewery as soon as the weather permits.

Deliveries of timothy seed at Chicago on March contracts were large, aggregating more than 30 cars.

F. W. Wilwerding, grain and lumber dealer at Earling, Ia., has been succeeded by Wilwerding & Loehr.

E. P. Gilbert of Detroit, Mich., has bought an elevator and mill at Pleasant Plains on the O. & M. R. R.

A movement is on foot to erect grain elevators and flour mills on the Calumet River at South Chicago, Ill.

Allan Bros., grain dealers and proprietors of a general store at Essex Center, Ont., will sell their business.

The Nicholas Krauss Grain Company has been incorporated at Chilton, Wis., with \$100,000 capital stock.

A new grain elevator is being built at St. Louis, Mo. A contract has been let for 4,000,000 feet of lumber.

The O'Donnell & Duer Bavarian Brewing Company has been incorporated at Chicago with \$300,000 capital.

The F. E. Pratt Lumber and Grain Company of Burlington, Kan., has been succeeded by B. F. Baker & Co.

The Fremont Brewing Company has been incorporated at Fremont, Neb., with \$80,000 capital, to build a brewery.

The Minneapolis Brewing and Malting Company of Minneapolis, Minn., is building a brewery, to cost \$400,000.

Hall Bros., dealers in grain and agricultural implements at Milford, Ia., have sold their implement business.

Chas. Schumacher & Co., grain dealers at Altamont, Ill., has been succeeded by Schumacher, Klitzing & Munzel.

Grain shipments from Halifax, N. S., are larger than usual this winter. The elevators are run to their fullest capacity.

David J. Jackson has been admitted into partnership with Coster & Martin, grain commission dealers at New York City.

A. D. & A. M. Packard, dealers in grain and agricultural implements at Shelburne, Minn., have dissolved partnership.

The Lion Brewery Company has been incorporated at Chicago, with \$300,000 capital, to manufacture malt and malt liquors.

E. J. Sinett carries on a grain and lumber business at Franklin, Man. His grain warehouse has a capacity of 7,000 bushels.

The Bonner Commission Company has succeeded the Bonner-Fairweather Company, grain dealers at Minneapolis, Minn.

The old "City Elevator" at Buffalo, N. Y., will be torn down by the New York Central Railway to make room for a warehouse.

The Crowell Lumber & Grain Company of Howell, Neb., has succeeded Fuller, Smith & Fuller, grain, lumber and coal dealers.

The Sidle-Fletcher Holmes Company of Minneapolis, Minn., will build a 100,000-bushel elevator near their "Northwestern Mill."

The Union Elevator Company of Minneapolis, Minn., will build a 100,000-bushel cleaning house in connection with its present plant. The company builds this house

to enable it to take out a license, and in that way to get around the state law, which provides against mixing by licensed elevators.

The St. Anthony Elevator Company at St. Paul, Minn., has amended its articles of incorporation, increasing its capital stock to \$300,000.

The citizens of Caledonia, Minn., have taken steps to give the Farmers' Alliance a bonus if it will establish a grain market at that place.

G. H. Caldwell, who has been running a bucket shop at Atlantic, Ia., failed March 7. He has left the town, leaving a deficit of \$2,000.

Charles O. Estes and Albert Farr of Eddington, Me., have bought the hulled corn factory of the late Samuel Royal, Jr., at Brewer, Me.

Harvey, Lucy & Co., grain dealers of Baltimore, Md., have engaged in the grain exporting business with the assistance of J. C. Vincent.

The Columbia Elevator Company, dealing in grain at Chicago, has made an assignment to John E. Carley. Assets and liabilities \$15,000.

The Topeka Mill & Elevator Company of Topeka, Kan., has established wholesale headquarters at Lincoln, Neb., with F. H. Vivjan in charge.

It is said that large quantities of corn and wheat are stored in Western Kansas which was raised in 1889 and has been held for higher prices.

James M. Hillery, grain, hay and feed dealer of New York City, has made an assignment to Joseph W. Hatch. Liabilities \$35,000; assets \$75,000.

The large grain elevator at Richford, Vt., built by F. H. Peavey on the C. P. R., has been completed at a cost of \$100,000 and is ready for business.

The new 1,500,000 bushel elevator of the West Shore Railway at Weehawken, N. J., was put in operation Feb. 12. It is one of the best in the country.

The Sheridan Roller Mill and Elevator Company has been organized at Sheridan, Va., with \$35,000 capital. The company will build a large elevator.

The 6 per cent. debenture bonds of the City of Chicago Grain Elevators, Limited, have been quoted at 75, although the company is earning a good income.

Minnedosa, Man., is doing a good grain business this year. Three times as much grain has been marketed each day as on the best days of previous seasons.

Yerex, the hull-less oat swindler, is expected to arrive at Belleville, Ont., March 10 in custody of C. M. Starke and Detective Rogers, who went to Germany after him.

The owners of flax mills in the province of Ontario, Canada, have declared themselves in favor of unrestricted reciprocity in the flax trade with the United States.

The wheat warehouses at Port Costa, Cal., are full, and 200 carloads of wheat are on the tracks awaiting shipment, but there are no ships to take the grain away.

The exportation of wheat from Manitoba will probably reach the government estimate of 13,000,000 bushels, as 8,000,000 bushels have already left the hands of farmers.

Considerable damaged wheat is being shipped East from Manitoba to make up for the scarcity of stock-feeding grains. Heavy shipments of oats and barley have been made.

A farmers' alliance has been formed at Cartwright, Man., to abolish the "grain exchange monopoly." It was decided that "middlemen must be totally exterminated."

Mr. Perrin of Sargent, Neb., has bought G. E. Penney's grain elevator at Ottawa, Ill., on the C., R. I. & P. tracks. Mr. Perrin conducted an elevator at Sargent, Neb., for three years.

The new Tradesmen's Grain Elevator and Storage House of the Baltimore & Ohio Railroad at Philadelphia has a capacity for 100,000 bushels grain, 800 tons hay, and 9,000 barrels flour.

Balder, Man., has two grain buyers, R. Anderson, representing J. T. Gordon, and Mr. Playfair, representing N. Bawlf. The grain elevator at that place is owned by the Manitoba Elevator Company.

The Tennessee Cotton-seed Oil Company has been formed, with a capital of \$1,000,000. The company controls seven cotton-seed oil mills at Memphis, one at Jackson, one at Nashville, and one at Huntsville.

More than 700,000 bushels of wheat have been marketed at Brandon, Man., since the opening of the season. The Canadian Pacific Railway carried away 400,000 bushels, and a large quantity remains in the elevators.

The grain elevators at Morris, Seneca and Marseilles, Ill., are full. The owners of the houses hope that the canal commissioners will decide upon an early opening of navigation, so that they can ship out their grain.

The Tradesmen's Grain Elevator and Storage Company at Philadelphia has applied for the admission of its house into the list of regular houses. This is the new terminal elevator of the Baltimore & Ohio Railway.

The Milwaukee and Chicago Breweries Company has been formed by an English syndicate. The company has control of the Valentin Blatz Brewery at Milwaukee, and five large breweries in Chicago, owned by the United

States Brewing Company, the K. G. Schmidt Brewing Company, and the Bartholomae & Roesing Brewery. The capital stock is \$7,750,000.

Jones Bros. & Co., grain dealers of Bellflower, Ill., have opened an office in the Buffalo Board of Trade, where M. B. Jones will look after their interests.

The Interior Elevator Company has placed a power pump in its elevator at Minneapolis, Minn. It will be connected with an artesian well for protection from fire.

Henry Allen & Co. have succeeded A. J. Wright & Co., the grain dealers of Buffalo, N. Y., who were involved in the failure of Bateman & Co. of New York City.

L. F. Hodges and Samuel Hyde, grain dealers, have been awarded \$9,281 by the United States Court at St. Paul in their suit against the Bank of Lanesboro, Minn., about some wheat furnished to a mill at Lanesboro in 1889.

The Carman Farmers' Elevator Company will be incorporated at Carman, Man., by David Pritchard, Henry Ardington, Alex. Morrison, Thomas Kernighan and William H. Elford, all farmers. The capital stock is \$10,000.

The glucose factories at Marshalltown, Ia., will suspend operations. The reason given by the owners is that the tariff law has ruined the business for one-half of all the factories in the country by letting sugar in free of duty after April 1.

Johnson & Comstock, grain dealers at Binghamton, N. Y., have confessed judgment and mortgaged their stock and building for \$85,000 to Mrs. Anne Johnson, wife of the senior member of the firm, to secure her as an indorser. Their liabilities are \$120,000.

The Inter-State Grain Company of Minneapolis, Minn., has begun suit against the United States Express Company to recover \$500 which the company sent by the express company to their agent, D. A. Mahoney, at Franklin, Minn., and which did not reach its destination. The express company refused to refund the money.

The St. Anthony Elevator Company at Minneapolis, Minn., will build a 300,000-bushel elevator near their 1,500,000-bushel house in Southeast Minneapolis. It is to be 58x130 feet, will be equipped with all the machinery of a complete mixing and cleaning house, and will be finished about Aug. 1, in time for the next crop.

The Fuller-Warren Company of Milwaukee, Wis.; Appleton Chair Company, Appleton, Wis.; W. D. Munroe, Cadott, Wis.; Manchester Locomotive Works, Manchester, N. H.; Gurney Refrigerator Company, Fond du Lac, Wis.; Manufacturing Investment Company, Appleton, Wis., and the Morgan Company, Oshkosh, Wis., have recently placed their orders with the Menasha Wood Sp'it Pulley Company of Menasha, Wis., for hickory pulleys, hangers, cone pulleys, friction clutch pulleys and pickers.

The transactions by M. J. Costello on the Chicago Board of Trade, through Elmendorf, Watte & Co., have been declared illegal by Judge Waterman of the Illinois Appellate Court. Elmendorf, Watte & Co. had sued Costello for \$10,150, but the latter got judgment for \$4,150. Judge Waterman could not see how 430,000 bushels of grain could be bought for \$2,500, and decided that neither party can recover where the deals were purely in options, with no intention of really buying or selling the property traded in.

The Inter-State Grain Company of Minneapolis, Minn., will build a 1,000,000-bushel elevator for storage purposes. The company has a 200,000-bushel house, which is used for cleaning, on the east side of the river. The new elevator is intended to serve as a terminal house for the system of elevators which the company has on the lines of the Great Northern, the Kansas City and the Minneapolis & St. Lou's railways, 81 houses in all, of which 40 were built last season. The new elevator will bring the elevator capacity of the company up to 3,000,000 bushels.

The Manhattan Malting Company at Moreland, Mont., formed by New York brewers, is establishing a large barley farm in the Gallatin Valley, eighteen miles west of Bozeman on the Northern Pacific Railway. The company has secured 38,000 acres of land and the control of irrigation rights and will plant 3,000 acres of barley this spring. This white barley will be malted and kiln dried and then shipped East to New York breweries. George Kinkel, Jr., is manager of the company, and Wm. A. Dalrymple is superintendent of farming at Moreland, where 8,000 acres of white barley will be sown in the spring of 1892.

The *Monitor* of Morden, Man., has the following to say about the Canadian Pacific Railway grain warehouse recently erected at that place: "A few weeks ago the people of Morden felt inclined to rejoice and throw up their hats over the extremely sudden arrival of a gang of carpenters, who ran up a grain warehouse on the south side of the track in an incredibly short space of time. Now, however, we feel rather mean over this building. There it stands; but what it is to be used for, or when will its doors be thrown open, no one knoweth. All kinds of inquiries have been made to all kinds of people, but nothing has resulted beyond ominous shaking of the head. There are ill-natured people around who aver that the erection of the said warehouse was a part of a little game of bluff going on between the C. P. R. and the millers."

OBITUARY.

J. Binder, grain dealer at Golden, Colo., is dead.

Fred Naber, grain and stock dealer at Liberty Mills, Ind., is dead.

J. B. Brigham of J. B. Brigham & Co., grain commission dealers at Boston, Mass., is dead.

W. H. C. Mickleberry of Mickleberry & McLendon, grain and hay dealers at Atlanta, Ga., is dead.

John B. Nutting, a member of the Chicago Board of Trade, died suddenly March 4, aged 70 years. He was unmarried.

Wm. W. Wood, employed by the Caledonia Elevator at Grand Rapids, Mich., died Feb. 6, leaving a large family unprovided for.

John Utley, an old member of the Boston Chamber of Commerce, died recently of heart disease. Mr. Utley was highly respected. It is supposed that the death of his partner, Mr. B. Boynton, a few days previously, had some effect in causing his demise.

Charles D. Rhodes, well known in grain, stock and financial circles, died in Chicago March 8 of pneumonia. Of late years he had been manager of the stock department of Kennett, Hopkins & Co. He always had an honorable reputation in his business dealings, and had many friends.

Leonard C. Campbell, once a grain buyer at Geneseo, Ill., died at that place March 4 of diabetes and cirrhosis of the liver. He was connected with the canal transportation business from 1850 to 1860. In 1865 he became auditor for the Union Stock Yards at Chicago. He had been police magistrate and city clerk. Mr. Campbell was 75 years of age and left a wife, two sons and a daughter.

Edward Roelkey, who was chief inspector of grain for the Baltimore Cora and Flour Exchange for nineteen years, died Feb. 12 after having been in ill health for more than a year. Mr. Roelkey was engaged in the commission business at Baltimore in the firm Roelkey & Bushey. He was the first chief inspector of grain at Baltimore, and was widely known for his ability and integrity as grain inspector. He had leave of absence since the beginning of 1890 on account of ill health. Last December he resigned and Charles McDonald was promoted to the position of chief inspector. Mr. Roelkey was 53 years old and left a widow, but no children.

Samuel Laughlin, a man prominently known in Milwaukee and Chicago, died in London Thursday, Feb. 12. Deceased was born in the north of Ireland, and came to this country early in the '50s. He was connected with Fowler Brothers in New York for several years. He afterward located in Milwaukee, which city he made the basis of his operations. He became a prominent factor in provisions and grain, and was identified with such men as John Plankinton, P. D. Armour, Alexander Mitchell, James McAlpin and others. His name was well known in all Eastern cities and in Liverpool, London and the European trade centers. Sam Laughlin, as he was familiarly called, had made his home in Chicago for the past fifteen years, and issued a weekly circular of the markets. Last year the milling company of E. Sanderson & Co. opened an office in London and placed Mr. Laughlin in charge. He took a severe cold, which turned into pneumonia, and on Thursday he died. He leaves a wife and three children—two boys and a girl.

Samuel H. McCrea of W. S. McCrea & Co., grain commission dealers at Chicago, died at his home March 11, aged 64 years, after having been in ill-health for two years. Mr. McCrea was born at Goshen, N. Y., in 1826. He went to California in 1849 to hunt gold, and was successful, came east and constructed a railway in Louisiana. In 1855 he started in the wheat business at Morrison, Ill., shipping grain to Chicago, at which place he has resided since 1862. He joined the Board of Trade, became a director, vice-president and, in 1870, president. During his administration the inspection of grain and the warehousing and storage of grain were taken from the control of the Board of Trade and the warehousemen, and placed under the surveillance of state officers acting under statutory law. This reform was principally due to the efforts of Mr. McCrea. He was once alderman and county treasurer, and held other positions of trust. In 1856 Mr. McCrea was married to Miss Caroline I. Johnson. His widow and three sons survive him.

Joseph Reynolds, who owned the "Diamond Joe" line of steamers plying between St. Louis and St. Paul, from which fact he gained the soubriquet of "Diamond Joe" Reynolds, died Saturday night, Feb. 21, at Prescott, Ariz., aged 71 years. Mr. Reynolds was formerly in the grain business at Chicago, and was well known on the Board of Trade and in banking circles. Mr. Reynolds' business integrity was his sterling quality. He was born in Sullivan county, N. Y., settled in Chicago in the '50s, and bought wheat in the streets of the city. He sent the cereal to New York, where he owned a mill. Reynolds made Chicago his home, and after trying the fur and hide business went on the Mississippi River, making Prairie Du Chien and McGregor, Ia., his headquarters. He was the biggest operator in the grain line in that part of the country for years, and became famous as well as rich. He had been in poor health for some time, but took an

active interest in the management of his affairs, and was in Arizona looking after his mining interests when he died. He left a wife, who lives at McGregor, Ia.

CHICAGO FLAXSEED TRADE.

The greatest flaxseed market in the world is Chicago, and the receipts at that city are growing larger year by year. The man who first inspected grain in this or any other country, Mr. S. H. Stevens, is at the head of the flaxseed inspection department, and it is claimed that it is the most reliable flaxseed inspection to be obtained. This, of course, is responsible to a large degree for the great increase in the receipts. In 1882 5,040,020 bushels were received; in 1883 3,122,955 bushels; in 1884 2,865,750; in 1885 5,930,925; in 1886 5,913,000; in 1887 5,142,500; in 1888 3,751,500, and in 1889 3,515,500 bushels were received. The largest amount ever in store at one time was on Jan. 10, 1891—1,993,513 bushels. The inspected receipts by grade for 1890, according to the report of Inspector S. H. Stevens, was as follows:

1890.	By Railroad.			Grand Total.
	No. 1.	Rejected.	No Grade.	
Month.	Bush.	Bush.	Bush.	Bush.
January.....	164,000	500	.....	164,500
February.....	121,000	1,500	.....	122,500
March.....	90,500	2,500	.....	93,000
April.....	92,000	1,000	.....	93,000
May.....	69,500	.....	.....	69,500
June.....	47,500	1,000	.....	48,500
July.....	121,000	4,000	4,500	129,500
August.....	967,000	44,000	45,500	1,056,500
September.....	1,732,000	103,000	164,000	1,999,000
October.....	1,656,000	132,500	32,500	1,821,000
November.....	984,500	159,500	18,000	1,162,000
December.....	487,500	48,500	1,000	537,000
Total.....	6,532,500	498,000	265,500	7,296,000

The amount of flaxseed annually consumed in Chicago is large, but the shipments are much larger. The shipments for 1882 amounted to 4,203,645 bushels; 2,466,167 in 1883; 1,911,834 in 1884; 4,042,132 in 1885; 5,400,166 in 1886; 3,959,459 in 1887; 2,760,609 in 1888, and 2,979,395 bushels in 1889. Flaxseed is shipped in bulk by lake the same as grain, and at present two boats are lying in harbor awaiting the opening of navigation. The following table from Inspector Stevens' annual report shows the inspected shipments of the different grades by rail and lake for the different months of 1890:

1890.	Month.	By Lake.		By Railroad.		Total by Railroad.		Total by Lake.		Grand Total.	
		No. 1.	Rejected.	No. 1.	Rejected.	No. 1.	Rejected.	No. 1.	Rejected.	No. 1.	Rejected.
		Bush.	Bush.	Bush.	Bush.	Bush.	Bush.	Bush.	Bush.	Bush.	Bush.
	January.....	157,198	500	.....	.....	157,698	.....	.....	.....	157,698	.....
	February.....	84,462	.....	.....	.....	84,462	.....	.....	.....	84,462	.....
	March.....	131,890	.....	.....	.....	131,890	.....	.....	.....	131,890	.....
	April.....	102,800	.....	.....	.....	102,800	.....	.....	.....	102,800	.....
	May.....	67,824	.....	.....	.....	67,824	.....	.....	.....	67,824	.....
	June.....	45,496	.....	.....	.....	45,496	.....	.....	.....	45,496	.....
	July.....	46,524	.....	.....	.....	46,524	.....	.....	.....	46,524	.....
	August.....	119,061	.....	.....	.....	119,061	.....	.....	.....	119,061	.....
	September.....	407,826	.....	.....	.....	407,826	.....	.....	.....	407,826	.....
	October.....	296,728	.....	.....	.....	296,728	.....	.....	.....	296,728	.....
	November.....	216,683	.....	.....	.....	216,683	.....	.....	.....	216,683	.....
	December.....	199,058	.....	.....	.....	199,058	.....	.....	.....	199,058	.....
	Total.....	1,875,550	76,280	.....	.....	1,951,830	76,280	.....	.....	1,951,830	76,280

The boiler in Ashbrook & Watkin's grain elevator at Humboldt, Ill., exploded Feb. 18 instantly killing Wm. Watkins, who was acting as engineer in the absence of the regular engineer, who was sick. He was inexperienced and allowed the water to get too low. Several persons in the building and vicinity had narrow escapes from death. Pieces of boiler iron a yard square were found two blocks away.

PRESS COMMENT.

HAS HELD HIS OWN.

The Farmers' Alliance, whose particular mission is to destroy trusts, contemplates the formation of a huge grain and live stock trust, covering Nebraska, Kansas, Missouri and Iowa. There is also talk of a cotton trust, to artificially cut down the production of the South's great staple. This is the old plan of fighting the devil with fire, but his satanic majesty has ever held his own in contests with that weapon.—*Louisville Times*.

AN EQUALIZER.

Recently spot wheat was taken by millers so close to the May price that the elevator companies that wanted more wheat to store with futures sold against it found it unprofitable to get it and they bought little. That feature of the business of trading in future acts as an equalizer and if the millers were to withdraw for the purpose of getting wheat lower, a widening of the difference of a fraction of a cent brings elevator buyers forward for the carrying charge there is in the premium of May above spot grain. If that selling of futures were out of the way the millers might, by combination, break prices, but with it they could not if they would seriously embarrass the market.—*Minneapolis Market Record*.

BELITTLED THEIR RESERVES.

We stated yesterday our belief that farmers had belittled their yield of wheat, and also the reserves as put forth by the Agricultural Department on the 10th. We extract from the *New York Commercial Bulletin* as follows: "How this (underestimate) could come about is also asked by those not familiar with the manner in which these crop reports and estimates have been worked the past year by the Farmers' Alliance and its members and organs. That there has been a systematic effort on their part to control both press and official reports and estimates of the crops during 1890, has been charged by close observers in the grain trade for the past nine months, and this conviction has at last become general in that trade, in view of these continued receipts in excess of last year's on large crops."—*Toledo Market Report*.

CAUSE OF LOW PRICES.

The figures relating to the quantities and prices of cereals which appeared in a recent report of Statistician Dodge of the Department of Agriculture afford a lesson which should not be lost. They show that the total value of the corn and wheat crops in years of great abundance is oftentimes less than in years when crops are light. In 1880 the corn crop was 1,717,431,000 bushels, the value of which was \$579,714,499, or 39.6 cents a bushel. The crop of 1881 was an unusually light one—1,194,916,000 bushels, but it was valued at \$759,482,170, or 63.6 cents a bushel. The lesson which these figures afford is that the price depends upon the supply and the demand. If the supply is in excess of the demand, the price will fall to a figure where dealers can afford to purchase the surplus to carry over to years when the supply is small.—*Indianapolis Journal*.

UGHT NOT TO GRUMBLE.

Wheat \$1.01½, corn 60½ cents, oats 51 cents, rye 97 cents. These are the prices which any holder of grain in the country could obtain yesterday for the property to be delivered at any time in May that would best suit the convenience of the seller. It was not necessary that the grain should be in store here previous to sale, as would be the case if the demand made by some of the farmers were acceded to. The property could be sold to arrive, provided the seller were willing to furnish reasonable security that he would make delivery at some time within the life of the contract. Surely these are good prices, and the farmer who has any grain to sell ought not to grumble because of the scarcity of money. In fact he does not. The fault finding is done by the men who are impecunious because they have nothing to sell, and fancy that if more money were issued by the Government they would manage to get hold of some of it.—*Chicago Tribune*.

WANT AMERICAN CORN.

Canada has virtually ceased to be an exporting country of coarse grains. The principal grains that we export other than barley are peas and oats. The export of these is rapidly dwindling, and very soon must altogether cease. The export of oats in 1889 from the whole dominion was only 337,185 bushels, and of peas 1,982,853 bushels. The export of the former, as compared with that in 1879, is 86 per cent. less, and of the latter 27 per cent. less. The export of corn in 1889 was 465 bushels, so that this industry in Canada surely does not want protection any longer. The imports of corn in 1889 for home consumption were 2,894,833 bushels, valued at \$1,266,910. If there had been no duty on corn, then importations of it for feeding purposes would doubtless have amounted to many millions of bushels. The most iniquitous feature of the duty on corn lay in its discrimination, until recently, against the farmer. The distiller got his corn duty free. After distillation he fed it to beef cattle, which were sold in the

same market as those of the farmer who had paid 7½ cents per bushel for his corn.—*Toronto Globe*.

THE STRENGTH IN THE GRAIN MARKETS.

The strength displayed in all the grain markets during the last week or so is the legitimate result of conditions at home and abroad. This is particularly the case with wheat, which now seems to occupy a position of strength which it has rarely attained at any period in its past history. We do not, of course, mean by this that prices are higher, but simply that the recent advance has been more fully justified by existing conditions.—*Chicago Daily Business*.

INTER-STATE COMMERCE COMMISSION.

The selection of another lawyer as a member of the Interstate Commerce Commission, and the meager comments called out by the appointment, emphasize the waning influence of an organization of which great things were once expected. If the commission were what its advocates designed a change in the membership would be a matter of much public interest, and curiosity would be manifested as to the peculiar qualifications of a new member in knowledge of railroad management or business affairs; but the discovery has been made that the solution of great railroad problems and the correction of railroad abuses does not rest with this little band of officeholders, and that if the Interstate Commerce Commissioners are good enough lawyers to recognize how little can be accomplished by law and how much must be left to natural influences, the commission will accomplish as much good, and do as little harm, as can be reasonably expected.—*New York Trade Bulletin*.

ITEMS FROM ABROAD

The stocks of wheat at Odessa, Feb. 14, were 7,200,000 bushels.

The prospects for the growing crop of flaxseed in India are good. The area planted exceeds that of last year by 6 per cent.

The new corn crop of the Argentine Republic will be small, probably not one-half of last year's crop, owing to depredations by locusts.

The prospect for a good yield of wheat in India is better than for two years past. Much more wheat has been received at Bombay than a year ago.

The wheat crop of Australia and New Zealand in 1889-'90 amounted to 42,480,131 bushels; in 1888-'89 24,833,977, and in 1887-'88 to 47,588,161 bushels.

The government of India are seriously considering the advisability of introducing grain elevators on the American model for the storage of wheat and other grain.

The falling off in the foreign supplies and the continued rise in the price of wheat has induced the Corn Millers' Association at Leeds, England, to advance the price of flour 4 shillings and 6 pence per sack of 252 pounds.

The report of the United States Consul-General at Kanazawa, Japan, estimates the rice crop this season at 50,000,000 koku (248,145,000 bushels), of which not less than 74,443,000 bushels will be available for export, ten times the largest export yet made from Japan.

The United Kingdom imported 60,474,210 hundred weight of wheat in 1890, of which 17,267,588 hundred weight was from the United States; in 1889, 58,602,271 hundred weight, of which the United States sent 17,016,250 hundred weight, and 57,147,933 hundred weight in 1881, of which 36,083,488 hundred weight were contributed by the United States.

The average price of wheat, barley and oats in England for the week ending Feb. 14 was: Wheat 32s. 3d., barley 28s., oats 18s.; and for the same week of 1890, wheat 29s. 8d., barley 31s. 8d., oats 18s. 7d.; same week in 1889, wheat 29s. 6d., barley 26s. 2d., oats 16s. 5d.; and in 1888, wheat 30s. 1d., barley 29s. 11d., oats 15s. 9d.; and for the corresponding week of 1887, wheat 32s. 11d., barley 26s. 2d., and oats 17s.

The Russian Minister of Agriculture has published accurate estimates of the cereal crops of 1890 in European Russia, exclusive of Poland, in which he gives the crop of winter wheat at 71,995,000 bushels against 41,650,000 bushels in 1889 and 111,265,000 bushels in 1888. The crop of spring wheat in 1890 was 125,545,000 bushels against 136,850,000 in 1889 and 184,450,000 bushels in 1888, showing the crop to be nearly 20,000,000 bushels more than in 1889, but nearly 100,000,000 bushels less than in 1888.

The present stir in the trade is chiefly owing to the continental buying, and is, perhaps, a little the result of rapidly declining reserves in this country. Millers and merchants so far place very little faith in the more sensational reports received daily from France, and are looking on with a wonderful degree of fortitude while cargo after cargo is secured for Havre, Dunkirk or Antwerp. It is devoutly to be wished that this policy of masterly inactivity taken up by many millers in the United Kingdom may not be pursued too far—stocks of foreign breadstuffs

in the United Kingdom are to-day smaller than they have been at any time in the last ten years.—*Liverpool Corn Trade News*, Feb. 24.

Advices from France respecting the damage to the winter wheat crop are very conflicting. French merchants are buying white wheat from California and India. If the damage, as estimated by some, extends to one-third of the 17,000,000 acres seeded to wheat, the loss may amount to a quarter of the normal crop, so that the imports may rise to 100,000,000 bushels or more, instead of less than 50,000,000, the usual quantity. The government may be compelled to reduce the duties on imported breadstuffs to relieve the necessities of the people.

During the past ten years the sources of the grain imports into the United Kingdom have changed to a certain extent. A marked increase has taken place in the export of wheat from Russia to England, while the export from the United States has decreased. The latter country, in 1881, supplied England with 63 per cent. of its total wheat import, last year it furnished only 28 per cent. of the whole. Russia, on the other hand, sent England 32 per cent. last year, against only 7 per cent. in 1881. The United States now exports wheat in the shape of flour.

Sir George Bonham in a report to the British minister on the agricultural question in Portugal, says: "It should, perhaps, be stated that the bulk of the wheat grown in Portugal is hard wheat, and not adapted to making the bread which is in general consumption in the country, whereas the American soft wheat is better suited to the machinery now used for grinding corn, and more nearly resembles the Portuguese soft wheat, which has always been preferred, so that the complaint to which allusion will be made, that the millers have introduced the taste for bread made from American wheat does not appear to be altogether justified."

Prof. Caillard, who has made a thorough study of the Turkish Empire, has lately called attention to the great natural capabilities of Asia Minor as a wheat field. According to his estimate, that country has an area of about 729,000 square miles, or 406,506,000 acres, and of this large tract of country one-third, or 150,000,000 acres is of exceptional fertility. That would mean a cultivable area fully equal to the land under tillage in the United States. Mr. Caillard proceeds to urge that it would surely be worth while for English capitalists to turn their attention to the construction of light railways from the interior of Asia Minor to various convenient points on the coast. Turkish cereals would then to a great extent take the place of American; they would certainly be inferior in price; while quite equal, if not superior, in quality."

A peculiarity connected with the wheat supply in Portugal is the system by which a few wealthy farmers, by advancing money to the struggling class of small farmers on the security of the growing crop, are enabled to acquire control over the entire wheat crop, which this year is a very deficient one. Thus a few large capitalists are enabled to withhold wheat from the market, except at a price which the millers are unable to give without bringing a rise in the price of bread, and as before stated, they are legally debarred from using foreign wheat until they have used twice the quantity of Portuguese. As the government reserves to themselves the sole right of importing flour, the increase in the price of bread, which would otherwise occur, is obviated, and the consumers are content to watch the contest between the millers and the farmers, by which is meant not the large class of small cultivators, but the wealthy capitalists above alluded to. The millers have been obliged to succumb, but, being also a powerful party, their defeat has given rise to their presentation of a memorial to the Minister of Finance by the Commercial Association of Lisbon, calling attention to the causes which, in their opinion, affect the national prosperity, and the remedies which appear to be called for.

PERSONAL

Junius S. Smith has been appointed weighmaster by the grain committee of the Buffalo Merchants' Exchange.

Mr. J. Clark of Glenboro, Man., has succeeded J. Robier as wheat buyer on the Moosomin, Assa., wheat market for S. P. Clark & Co.

Harry Cushman has entered the grain, flour and feed business at Rewey, Wis. Mr. Cushman left that place twelve years ago and went to Dakota.

M. L. Crittenden, grain dealer and manager of the Buffalo Board of Trade building, will enter the grain business at Milwaukee May 1 with his sons.

Frank H. Peavey, the well-known grain dealer of Minneapolis, Minn., has given \$10,000 to the town of Eastport, Me., for a public library. Mr. Peavey is a native of Eastport.

Pataha Flat had a field of wheat that yielded 75 bushels to the acre. There are sundry farmers in the Palouse country who claim 66 bushels to the acre. Around Walla Walla 45 is the highest reported to us.—*Journal*, Walla Walla, Wash.

Latest Decisions.

Responsibility of Maker of Note Who Signs Only as Indorser.

Where a note is signed by a third person before delivery in order to give the bank at which it is discounted the security of two names, as required by its rules, with the intention of assuming the character and the liability of an indorser, and not the maker, his liability is that of an indorser, and he is entitled to notice of the dishonor of the paper, although the maker and the bank understood that his liability was that of a surety.—*DePue v. Bank of Salem, Supreme Court of Indiana.*

Municipality—Water Company—Action.

According to the decision of the Kentucky Court of Appeals in the case of Duncan's Executors vs. Owensboro Water Company, a resident of a city may maintain an action against a water company to recover for a loss by fire resulting from the company's negligence in the discharge of its duty under a contract with the city. This same point was raised last fall by an Indiana grain firm whose elevator was destroyed by fire owing to negligence on the part of the waterwork's company, and the firm's case against the company is now pending in the courts.

Legality of Contracts in Violation of Interstate Commerce Acts, Made Before Its Passage.

It is a rule of law that no contract can be properly carried into effect which was originally made contrary to the provisions of law, or which, being made consistently with the rules of law at that time, has become illegal in virtue of some subsequent law, and a contract entered into prior to the passage of the interstate commerce law for the carriage of freight by a railway company at rates contrary to the provisions of that law, cannot be enforced after its passage, and the shipper cannot recover any rebates stipulated for in such contract.—*Bullard v. Northern Pacific Ry. Co., Supreme Court of Montana.*

Waiver of Broker's Lien by Conversion of Goods.

Where a broker receives goods under an agreement to sell them on commission, and mixes them with similar goods of his own so that they cannot be distinguished from the latter, and then refuses to have anything more to do with them, he waives his lien upon them for his commission, and is liable to the owner for the full value of them at the time they were so mixed by him. And while it is not conclusive evidence of its value, the amount which the owner agreed to sell them for may be considered in determining the amount for which the broker is liable.—*Lehman v. Schmidt, Supreme Court of California.*

Contract for Commissions.

The New York Court of Common Pleas has decided in the case of Blake vs. Voight that where a contract is entered into for the payment of commissions on the sale of goods "influenced" by the broker has terminated before the time for which it was entered into had expired, the broker is entitled to commissions on goods received prior to such termination, but not then sold. A contract which is by its terms not to be entered upon until a future time, and is to be performed within a year from the time it is to be entered upon, although it is not to be performed within a year from the date it is agreed upon, is not within the provisions of the statute of frauds as an "agreement by its terms not to be performed within a year from the making thereof."

Failure to Deliver Market Quotations.

In the case of the Western Union Telegraph Company vs. Collins, the Supreme Court of Kansas has decided that where a telegraph company neglects to deliver a telegram containing market quotations sent to a person engaged in selling the articles quoted, in consequence of which failure or neglect the seller sends his goods to a market at which he receives less than he would have received at the place where the quotations were made, the seller is entitled to recover the difference from the company and the difference in freight paid, if more, or less such difference if less than the freight quoted. The meaning of a message couched in trade terms not readily intelligible to those unfamiliar with such terms, but easily understood by one familiar with their trade use, may be explained by the sender of the message.

Liability of Express Company.

In an action against an express company for the value of goods which had been misdelivered, plaintiff testified that when they reached their destination the company's agent agreed that plaintiff might take some of them and leave the rest in the office for a day or so, upon paying the charges and signing a receipt, and that upon calling for them he was informed that they had been delivered to other parties upon the supposition that he had sent for them. The agent testified that he had no authority to make such an arrangement, but did not say that he so notified plaintiff. There had not been a complete delivery of the goods to plaintiff, and the question of defendant's liability as a warehouseman should have been submitted to the jury, for if the arrangement was made before payment of the charges and signing of the receipt with a view

to giving plaintiff reasonable opportunity of sending for his goods, it was a matter within the apparent scope of the agent's authority, and would bind the company in the absence of any notice to plaintiff of any restriction on the agent's authority.—*Oderkirk v. Fargo, Supreme Court of New York.*

Bill of Lading—Draft—Sale.

The Supreme Court of Tennessee held in the recent case of the Second National Bank of Columbia vs. Cummings, et al., that where a bill of lading is attached to a time draft, the transaction imports a sale upon credit, and that the bill of lading is only to be retained to secure acceptance of the draft, and is to be delivered up on acceptance unless there be instructions to hold until payment, or circumstances indicating that the bill is to be held to secure both acceptance and payment, but that the fact that the bills of lading are taken to the order of consigners, and indorsed by them to the cashier of the bank through which they were to be transmitted for collection, rebuts any implication arising from the fact they were time drafts, and therefore sales on a credit, and shows an intent to hold the bills as security for the payment of the drafts drawn against the shipment.

Alteration of Note After Execution.

A note was made by a firm, which was filled in on a printed blank, by which it was to be payable at a certain bank. Desiring to make it payable at another place these words were erased and others inserted in their place. In doing this the word "maturity," indicating the time at which interest should commence, was not erased, though it was intended that the note should draw interest from the date of its execution. Thereafter the owner called the attention of one of the firm to the failure to that erasure, and it was then done with his consent. The other member of the firm will not be heard to object to this alteration, as it was in conformity with his original agreement, and as his partner had full power to bind him by his signature of the firm name, he could also bind him by his consent to the alteration of the firm signature.—*Mace v. Heath, Supreme Court of Nebraska.*



Issued on February 17, 1891.

CONVEYOR.—Charles J. Hartley, Decatur, Ill., assignor of two-thirds to John K. Warren and Bradford K. Durfee, same place. (No model.) No. 446,597. Serial No. 334,996. Filed Dec. 26, 1889.

CONVEYOR TROUGH BOTTOM.—James M. Dodge, Philadelphia, Pa., assignor to the Dodge Coal Storage Company, Naugatuck, Conn. (No model.) No. 446,436. Serial No. 351,539. Filed May 12, 1890.

GRAIN CONVEYOR.—John B. Bartholomew, Des Moines, Ia. (No model.) No. 446,566. Serial No. 353,797. Filed May 31, 1890.

GRAIN REGISTER.—Joseph H. Peachey, Allensville, Pa. (No model.) No. 446,788. Serial No. 360,981. Filed Aug. 4, 1890.

GRAIN SEPARATING APPARATUS.—Levi A. Simons, Omaha, Neb. (No model.) No. 446,794. Serial No. 365,228. Filed Sept. 17, 1890.

WIRING ATTACHMENT FOR BALING PRESSES.—John Kruse, Portland, Ore. (No model.) No. 446,600. Serial No. 349,957. Filed April 29, 1890.

Issued on February 24, 1891.

ALARM BELL FOR GRAIN ELEVATORS, ETC.—George W. Nye, Chicago, Ill. (No model.) No. 446,881. Serial No. 333,594. Filed Dec. 13, 1889.

FEED DEVICE FOR GRAIN CLEANING MACHINES, ROLLER MILLS, ETC.—William W. Huntley, Silver Creek, N. Y., assignor by mesne assignments to Huntley, Cranston & Hammond, same place. (No model.) No. 447,072. Serial No. 253,056. Filed Oct. 22, 1887.

WAGON DUMP AND ELEVATOR.—John S. Kidd, Des Moines, Ia. (No model.) No. 447,190. Serial No. 361,638. Filed Jan. 4, 1889. Renewed Aug. 11, 1890.

WAGON DUMP AND ELEVATOR.—John S. Kidd, Des Moines, Ia. (No model.) No. 447,191. Serial No. 361,640. Filed Sept. 5, 1888. Renewed Aug. 21, 1889. Again renewed Aug. 11, 1890.

Issued on March 3, 1891.

BAG HOLDER.—John M. Holladay, Holladay, Va. (No model.) No. 447,686. Serial No. 353,913. Filed June 2, 1890.

CLOVER HULLER.—Lewis S. Whiting, Ashland, assignor of one-half to Horace H. Whiting, Canton, O. (No model.) No. 447,743. Serial No. 354,398. Filed June 5, 1890.

ELEVATOR.—Theodore L. Marvel, Taunton, Mass., assignor to William H. Phillips, same place. (No model.) No. 447,435. Serial No. 369,430. Filed Oct. 27, 1890.

MACHINE FOR SCOURING GRAIN.—Dennis E. Sibley, Chicago, Ill. (No model.) No. 444,370. Serial No. 369,446. Filed Oct. 27, 1890.

GRAIN SEPARATOR.—Frank F. Landis, Waynesborough, Pa. (No model.) No. 447,433. Serial No. 365,074. Filed Sept. 15, 1890.

GRAIN WEIGHER.—Charles H. Cooley, Hartford, Conn., assignor to the Pratt & Whitney Co., same place. (No model.) No. 447,715. Serial No. 358,643. Filed July 14, 1890.

REGISTER FOR GRAIN WEIGHERS.—Francis H. Richards, Hartford, Conn., assignor to the Pratt & Whitney Co., same place. (No model.) No. 447,719. Serial No. 365,631. Filed Sept. 20, 1890.

REGULATOR FOR GRAIN WEIGHERS.—Charles H. Cooley, Hartford, Conn., assignor to the Pratt & Whitney Co., same place. (No model.) No. 447,721. Serial No. 338,817. Filed Jan. 31, 1890.

REGULATOR GRAIN WEIGHER.—Francis H. Richards, Hartford, Conn., assignor to the Pratt & Whitney Co., same place. (No model.) No. 447,354. Serial No. 364,574. Filed Sept. 10, 1890.

Issued on March 10, 1891.

BALING PRESS.—Manetho C. Jackson, Denver, Colo. (No model.) No. 447,950. Serial No. 380,735. Filed June 5, 1889. Renewed Feb. 9, 1891.

DRIVE CHAIN.—Sterling Elliott, Newton, Mass. (No model.) No. 447,813. Serial No. 314,039. Filed June 12, 1889.

FEEDER ATTACHMENT FOR CLOVER HULLERS.—John W. Harvey, Cumberland, Ind., assignor of one-half to George E. Wray, same place. (No model.) No. 448,148. Serial No. 368,986. Filed Oct. 22, 1890.

GRAIN SEPARATOR.—De Marquis Scott, Goss, Mo. (No model.) No. 447,845. Serial No. 370,430. Filed Nov. 5, 1890.

GRAIN CLEANING DEVICE.—Frank F. Landis, Waynesborough, Pa. (No model.) No. 447,834. Serial No. 370,799. Filed Nov. 8, 1890.

CLOVER SEED RECLENER.—Jacob Welty and Arthur A. Leach, Hayesville, O., assignors of one-third to Hezekiah Butcher, same place. (No model.) No. 447,801. Serial No. 363,988. Filed Sept. 5, 1890.

GRAIN WEIGHER.—Charles H. Cooley and Francis H. Richards, Hartford, Conn., assignors to the Pratt & Whitney Co., same place. (No model.) No. 447,762. Serial No. 362,907. Filed Aug. 23, 1890.

AUTOMATIC MEASURING MACHINE.—John W. Gaede, Maroa, Ill. (No model.) No. 448,018. Serial No. 368,378. Filed Oct. 17, 1890.

TRADEMARKS.

GRAIN.—Pittman & Harrison, Sherman, Tex. Application filed Oct. 15, 1890. No. 18,937. Used since July 1, 1890. The representation of an ear of corn loaded upon a wagon.

RECEIPTS OF WHEAT AT PRIMARY MARKETS.

The following table shows the total receipts of wheat at the markets mentioned from June 28, 1890, to March 7, 1891, compared with two previous years:

Points.	1890-91.	1889-90.	1888-89.
Chicago.....	11,460,000	16,913,000	10,768,000
Milwaukee.....	5,460,000	5,547,000	4,990,000
Minneapolis.....	38,198,000	34,759,000	30,577,000
Duluth.....	12,725,000	14,394,000	4,850,000
Total bushels.....	67,843,000	71,613,000	51,185,000

The total receipts of winter wheat at the markets mentioned from June 28, 1890, to March 7, 1891, compared with two previous years, were as follows:

Points.	1890-91.	1889-90.	1888-89.
St. Louis.....	9,446,000	12,927,000	11,031,000
Toledo.....	4,554,000	5,677,000	7,038,000
Detroit.....	3,236,000	4,363,000	6,365,000
Kansas City.....	7,082,000	5,033,000	1,784,000
Cincinnati.....	846,000	1,348,000	1,501,000
Total bushels....	25,164,000	29,348,000	27,719,000

GRAND TOTAL.

	1890-91.	1889-90.	1888-89.
Spring Wheat.....	67,843,000	71,613,000	51,185,000
Winter Wheat.....	25,164,000	29,348,000	27,719,000
Total bushels.....	93,007,000	100,961,000	78,904,000

The exports of barley from San Francisco by water during January embraced 19,411 centals to the Hawaiian Islands, 11,212 centals to New York and 873 centals to other markets, or a total of 31,496 centals, valued at \$50,291. From July 1, 1890, to Feb. 1, the shipments by water were 255,689 centals, valued at \$374,364.

WATERWAYS

The Lake Carriers' Association held its annual meeting at Buffalo, N. Y., March 4, and elected its officers and board of managers for the ensuing year.

Advices from Cheboygan, Mich., state that an unusually early opening of the Straits of Mackinac may be expected as the weather has been very mild recently.

The Committee on Rivers and Harbors has accepted an invitation from vessel owners on the great lakes to make a tour over the lakes next summer and inspect the points where appropriations are required and desired.

The indications are that lake freight rates will be lower the coming season than before for many years. Reasons given are the increased tonnage of lake craft and the scarcity of freight caused by the failure of the corn crop, the lack of demand for ore and the large amount of coal stored up in the West.

The improvement of Red River at St. Andrew's Rapids has been proposed, so as to enable Lake Winnipeg steamers to run up the river to Winnipeg. The Winnipeg Board of Trade has instructed its president to call the attention of the Dominion Government to its promise regarding the improvement of the navigation of the Red River.

A meeting of representatives of the trunk lines and of the Central Traffic, Transcontinental, Lake and Northwestern Lines was held in New York City, Feb. 20, to arrange for higher lake and rail rates in the spring. Last year the Great Northern demoralized rates, but this year it is said that the company has agreed to maintain higher rates.

The bulletin issued by the census office states that in 1886 the net tonnage of vessels used for transportation on the great lakes was 634,652; in 1890 it had reached 826,360, an increase of 191,708 tons. The estimated value of these vessels in 1886 was \$30,597,450, and in 1890 the aggregate valuation was \$58,128,500, an increase compared with 1886 of \$27,531,050.

In his address delivered to the Port Arthur Board of Trade, ex-President George A. Graham said that the work of enlarging the St. Lawrence Canals should be pushed to completion as rapidly as possible, and that the farmers of Manitoba will not enjoy the minimum freight until the large vessels which pass through the Welland Canal could also go down through the St. Lawrence River.

A movement is on foot among the large vessel owners and transportation companies to delay the opening of navigation on the Great Lakes until May 1, or even to May 15. Their object is to reduce expenses by not having the boats in commission so early. They think that higher rates can be obtained and that the season of navigation will continue longer. The seamen, however, are very indignant at this.

The Lake Michigan Vessel Owners' Association and the Seamen's Union have recently held frequent conferences. It is said that good feeling prevails and that important results will follow. A remedy will be devised for the evils of shipping crews in the busy season. It has been proposed that hereafter all subordinate officers and sailors desiring to ship on another boat shall be compelled to show an honorable discharge from the last master they sailed under.

The Canadian Marine Association has asked, in resolution that the Canadian Government continue the practice of not collecting full toll on grain passing to the seaboard. That is, that the toll rates on all grain passing to the seaboard by way of Kingston and Montreal through the Welland and St. Lawrence Canals shall be 2 cents per ton, as has been the case for the past five years. The association also asks that a grain inspector be stationed at Kingston to weigh all grain transhipped from the West, Chicago in particular, in order to remove the cause of the complaints of shortages and to put an end to the recriminations between the Chicago elevator weighmasters and the Kingston transshippers.

Mr. E. L. Corthell read a paper before the Canadian Society of Civil Engineers on "An Enlarged Waterway Between the Great Lakes and the Atlantic Seaboard," in which he stated that by the Hurontario Ship Railway, Lakes and St. Lawrence River route, the cost of transportation between Chicago and Liverpool would be \$3.26 per ton, against \$6.74 by the all-rail route to New York. The distance and the time required would also be less by the first route than by rail. The only defect with the Hurontario Ship Railway route would be the fact that it would be closed to navigation about 140 days in the year, while the all-rail route is always open. By his estimate there would be a saving of \$3.48 per ton on 8,000,000 tons of traffic per year, or more than the entire estimated cost of preparing the enlarged waterway from the foot of Lake Ontario to the sea. Mr. Corthell also said: "The competition in English and other importing markets of Europe between the wheat of our Northwest, the Pacific coast, India, Russia and the Argentine is so close that a substantial advantage in cost of transportation like the above to both Canadian and United States cereal producers will at once work a revolution in trade, and lead to an important development of agricultural products and to a material

prosperity over the 450,000 square miles comprising the basin of the Great Lakes, and extending to the lands outside and remote from it, but capable of reaching by rail or water routes its seaports, as the great cities of the lakes will then be."

A plan for a ship canal across the lower peninsula of Michigan, connecting Lakes Michigan and Huron, has been submitted to the joint legislative committee of the Michigan State Legislature by Charles Sligh of the Grand Rapids Board of Trade. This plan differs from others in that the eastern end does not communicate directly with Lake Erie. It is proposed that the canal begin at Grand Haven on the Lake Michigan shore, then up Grand River to the town of Muir. Here it would connect with the Shiawassee River, down that stream into the Saginaw River, thence to Saginaw Bay. The highest point would be but forty feet above Lake Michigan.

A gentleman who has made a study of the subject, says New York state may spend money on the Erie Canal, but in order to get the full benefit of the improvements the state must own or control a few elevators at Buffalo or New York. As long as railway managers control the elevators at those points ten times as much will be charged for transferring grain shipped by canal as is charged for that service when the grain goes to the seaboard by an all-rail route. In fact, in 1886 the Pennsylvania Railroad Company was detected in transferring grain to ships at Jersey City free of charge. Many of the elevators at Buffalo are paid to stand idle. Railway managers are not paid high salaries for nothing.

The Erie Ship Canal Commission, which was appointed by Governor Beaver in accordance with a joint resolution passed by both branches of the Pennsylvania General Assembly in 1889, has prepared an exhaustive report for the information of the members of the legislature. The canal recommended by the commission would pass vessels 230 feet long on the load water line, with 36 feet beam and 14 feet draft. The commissioners find that the only practicable route is between Conneaut Harbor on Lake Erie to Rochester on the Ohio River, and that a portion of it must pass through Ohio, west of the old Erie Canal. Reasons are given why Erie Harbor is not available as a lake terminus. The cost is estimated at \$26,375,188. It is claimed that if the canal is constructed Pittsburg will become an important grain market.

Chairman Guenther of the Assembly Canal Committee has introduced a bill in the New York Legislature providing for an appropriation of \$500,000 for increasing and improving the lockage capacity of the Erie Canal, and to improve the Erie, Oswego, Black River, Cayuga and Seneca and Champlain Canals. The bill directs the Superintendent of Public Works to lengthen two or three more locks on the Erie Canal before the opening of navigation in 1892. The superintendent is to select those locks for improvement that in his judgment will most assist navigation. The locks, when completed, will be 220 feet long, 18 feet wide. A depth of seven feet of water is to be maintained between such points as he may deem important. The Champlain Canal is to be deepened to 6 feet with a width of 44 feet at the bottom. The other canals are to be improved as the interests of commerce most require. The appropriation is divided as follows: \$220,000 for lock lengthening on the Erie Canal, the balance, if any, of that sum to be used for deepening; \$50,000 for the Oswego Canal; \$80,000 for the Black River Canal; \$140,000 for the Champlain Canal, and \$10,000 for the Cayuga and Seneca Canal. These improvements, if effected, would, without doubt, be of great value to the grain trade, by facilitating cheap transportation.

MORTGAGING CROPS.

In 1886 the Mississippi legislature passed an act prohibiting citizens from mortgaging their crops before planted. A test case was immediately made of the constitutionality of the act in the Supreme Court of that state, and the court unhesitatingly declares against the act. It was then shown that the legislature cannot interfere in the matter of an individual mortgaging his crop. That is his private affair, and regardless of statute or no statute, such mortgages are valid, and the acts are unconstitutional.

A COW ROBS AN ELEVATOR

One morning recently the proprietor of the grain elevator at Panola, Ill., discovered that something had gone wrong at the elevator while he slept, and, it is reported, that the machinery became clogged and would not work. However, a large cow was found lying in one of the hoppers of an oats bin. She had squeezed through a narrow door in the side of the driveway, had gone up into the second story and jumped down about ten feet to get at the oats. With great effort the animal was got out alive. We have not been informed why the cow did not start up the elevator and clean her oats before eating them, but we suppose the fuel had been stolen.

The first artesian well sunk exclusively for irrigation in the vicinity of Mellette, S. Dak., is just completed on a farm five miles south of that city. The volume of water is estimated at about 2,000 gallons per minute. The owner some time ago completed the necessary trenches and ditches, and is well equipped for a thorough trial of the system of irrigation by means of artesian wells. A number of other wells are in progress and will shortly be completed.

THE EXCHANGES

A membership ticket in the New York Produce Exchange was sold recently at auction for \$710.

The Buffalo Merchants' Exchange is negotiating for the purchase of the Board of Trade building. The dues have been fixed at \$20 for the ensuing year, the committees have been organized and are doing good work.

The grain dealers and millers at Winnipeg, Man., formed, three years ago, a section of the Winnipeg Board of Trade. This section has grown until now it is now a powerful institution known as the Winnipeg Grain and Produce Exchange.

The quotations of the Chicago Board of Trade are free to all commercial exchanges in the United States, but they must make their own arrangements to obtain them. The Chicago Board of Trade has gone out of the business of furnishing quotations.

The Philadelphia Commercial Exchange has elected the following officers for the ensuing year: President, James P. Canby; vice-president, Albert A. Keene; treasurer, L. K. Passmore; directors, Charles E. Culpepper, Penrose A. McClain, Samuel L. McKnight, E. L. Rogers, Antonio Sans and Clarence E. Steel.

In 1884 the Toronto Corn Exchange amalgamated with the Board of Trade with 200 members. The membership rapidly increased and it was found necessary to find more commodious quarters. A new building was decided upon and has recently been completed. It is seven stories high, built of red sandstone, and cost, with site, \$440,000.

Grain dealers of the Detroit Board of Trade are dissatisfied because the quotations of that market are not posted in other grain centers, at Chicago, especially. The operators fear that unless their market is recognized their trade will go to other points. The reason why Detroit quotations are not posted in Chicago is that Detroit has not arranged matters with the Western Union Telegraph Company. Chicago gets quotations from all points on the company's list.

At the annual election of the Montreal Corn Exchange, held Jan. 27, the following officers were elected: R. M. Esdaile, president; David Robertson, treasurer; committee of management, Messrs. John Baird, D. A. McPherson, A. E. Gagnon, James S. Norris, H. W. Raphael, William Stewart (re-elected), and A. J. Brice; board of review, Messrs. C. H. Gould (chairman), John Dillon, John E. Kirkpatrick, J. O. Lafreniere, G. M. Kinghorn and Robert Sims (re-elected).

The following joke was perpetrated recently on the Chicago Board of Trade: One day when the wheat market was very heavy and prices dragged slowly down in spite of a flood of bullish dispatches, which were kept in good circulation, a certain bear operator pinned a sheet of paper to the hull pen in the center of the hall. There was a general desire to see the "latest dispatch." It read: "No stranger should leave the city without a 'five' of wheat for the loved ones at home. A bullish dispatch given with each lot purchased."

A meeting of the council of the Winnipeg Grain Exchange was held Jan. 17. A committee was appointed to push the incorporation through the legislature. Power will be asked to enable the board to issue debentures up to \$500,000, for building, property, etc. A committee was also appointed to wait on Hon. Mr. Greenway to ask to have a bulletin issued showing the value to the farmers of growing a better class of oats. A committee was also appointed to draw up a code of trade terms to govern transactions between members of the exchange.

At the annual election of the Winnipeg Board of Trade the following officers were unanimously elected: President, S. Nairn; vice president, J. E. Steen; treasurer, W. J. Atkin; secretary, C. N. Bell. The following were chosen for the council: R. T. Riley, J. H. Ashdown, D. K. Elliott, D. Fraser, J. H. Howsner, A. Strang, S. Spink, G. F. Stephens, M. Bull, E. L. Drewry, G. F. Galt, D. W. Bole; board of arbitrators, A. Macdonald, K. McKenzie, E. L. Drewry, G. F. Galt, G. J. Maulson, S. A. D. Bertrand, J. H. Brock, R. T. Riley, S. Spink, John Galt, Wm. Hespeler, J. E. Steen.

At the annual meeting of the Detroit Board of Trade March 4, Secretary George M. Lane read his annual report. He said that the receipts of barley the past season have been the heaviest known at that market. Early in the year the membership was doubled and there was a fair prospect that the plans for placing the association on a firmer basis would be realized, but certain influence interrupted progress in this direction. The secretary gave a history of the efforts of the Board to do away with the freight discriminations made by trunk lines against lake ports. Regarding Detroit's grain trade he said: "The grain trade of Detroit has been unsatisfactory and disappointing. In 1886 the total receipts amounted to 15,000,000 bushels, while last year they were considerably less than 10,000,000. The decrease is very largely due to the poor crops harvested during the past two years through the Southwest and to the reduced product in Michigan."

**WEIGHT OF EAR CORN PER
BUSHEL OF SHELLED CORN.**

Tests have been made, Feb. 14, 1891, in which a trifle over 65 pounds of Murdock, an early maturing; 66½ pounds of Leaming; less than 67 pounds of Burr's White, and a little over 66 pounds of mixed varieties of yellow dent made 56 pounds of shelled corn. The ears were not especially selected. The corn was taken from the crib in three cases and from shocked corn in the fourth. Probably a little more would be required if large quantities of either variety tested were shelled by power shellers. The indications are clearly that 70 pounds is more than is necessary to make a bushel of shelled corn this season in Central Illinois.—*Bulletin No. 13, Illinois Agricultural Experiment Station.*

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I would like to buy a good second-hand rubber belt with 12 inch or 14-inch cups attached and 100 feet long. Address

M. R. ARMINGTON, Natrona, Ill.

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Will sell at reasonable figures the following outfit, made by the Ames Iron Works: One center-crank, eight-horse power engine and ten-horse power tubular boiler with all connecting pipes; 34-foot stock; inspirator on boiler; all complete. Has run only five months, and is as good as the day it came from the factory. Must dispose of it in order to put in more power. Address

T. E. MALDEN, Manson, Ia.

SECOND-HAND MACHINES.

I have for sale the following machines in good order: One No. 4 and one No. 2½ Barnard & Leas Separator; one No. O Band and one No. G Nonpareil Feed Mills; one No. 2 Magic Feed Mill; one No. New 4½ Scientific Feed Mill; one No. 2 Morgan Scourer; one ½-in. Crown Water Meter; two 5 ft. by 32 in. hexagon scalping reels, and one double 6 ft. 6 in. by 30 in. hexagon scalping reel, etc. Address

WM. SESSINGHAUS, 1444 St. Louis avenue, St. Louis, Mo.

MACHINERY FOR SALE.

I will sell the following described machinery at 50 per cent. below first cost: One Fairbank 40-ton Track Scale 33 feet long, in good order; one 10-horse power portable engine, almost as good as new, made by Woodson & Tenney of Dayton, O.; one No. 4 Warehouse Corn Sheller and Cleaner combined, in good order, made by the Union Iron Works of Decatur, Ill., and one Howe 5-ton Hay Scale, as good as new. Address

J. K. HOSTETTER, Osborn, O.

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A horse power elevator of 20,000 bushels' capacity, in the best hard wheat territory in Minnesota, on the Fargo & Southern Railroad. I will sell outright or rent for a term of years, or I will handle grain for parties for so much per bushel. I have the J. Leaser Patent Self-Operating Grain Cleaner to clean wheat direct from farmers' wagons, before the wheat is weighed, and clean as fast as farmers can unload from wagons. This machine is operated by the weight of the grain. For further information address

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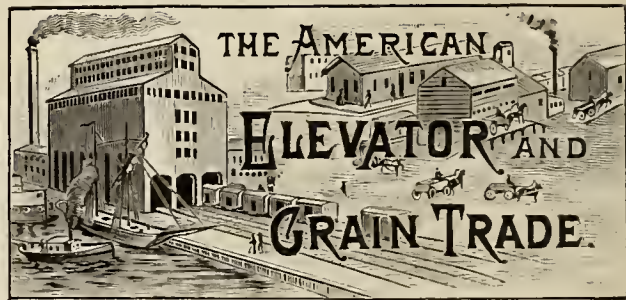
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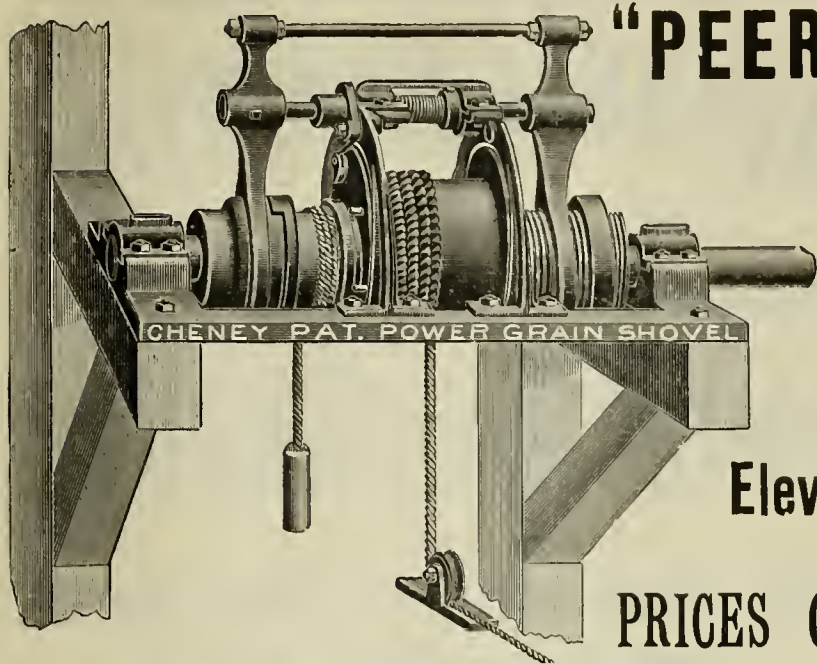
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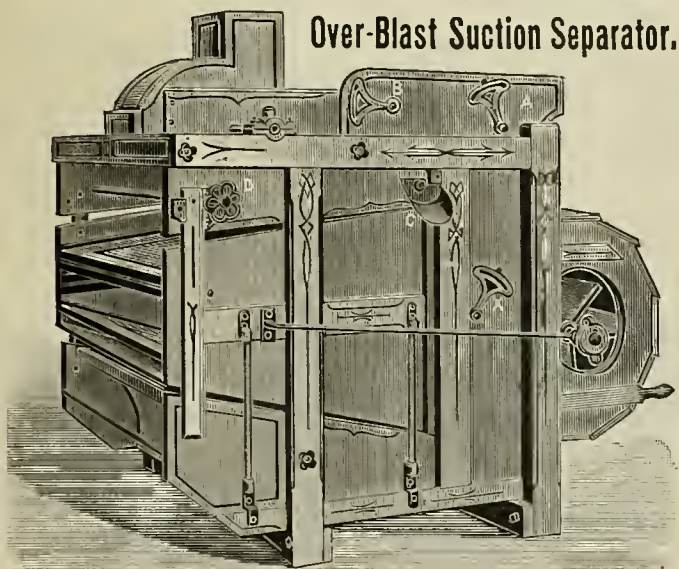
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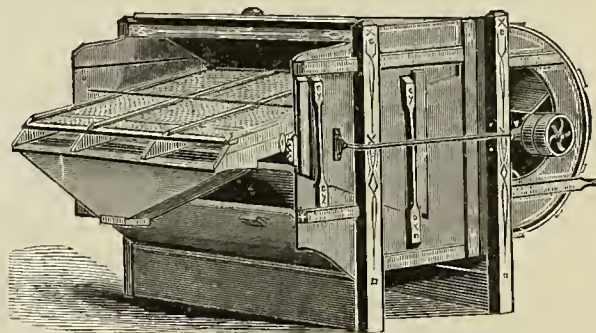
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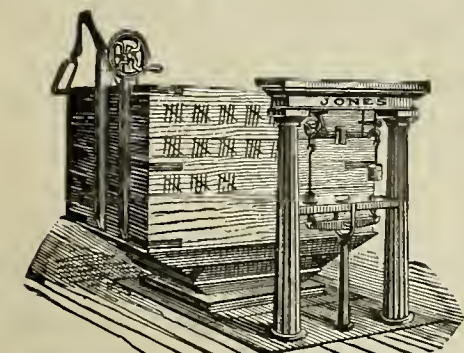
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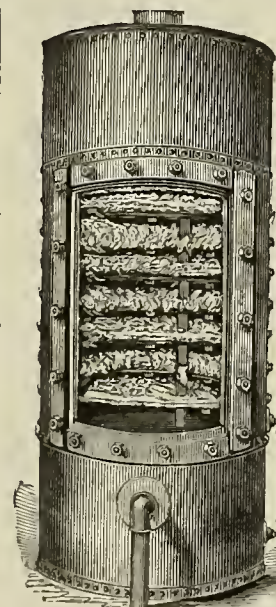
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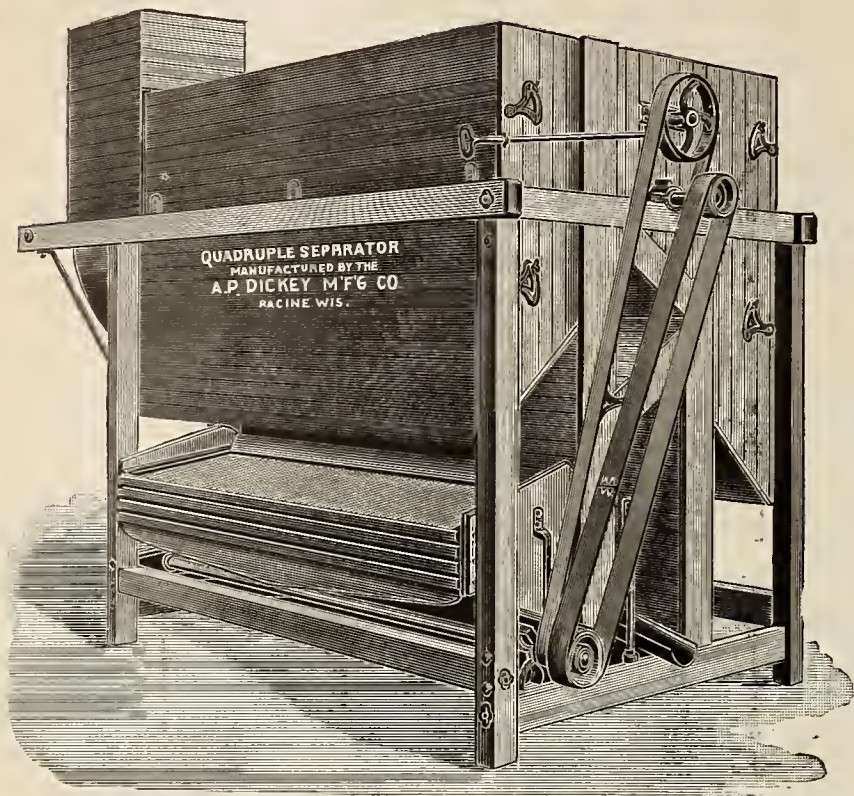
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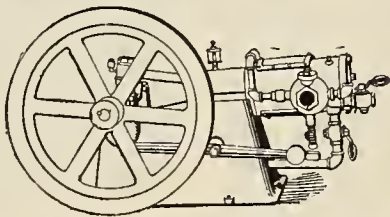
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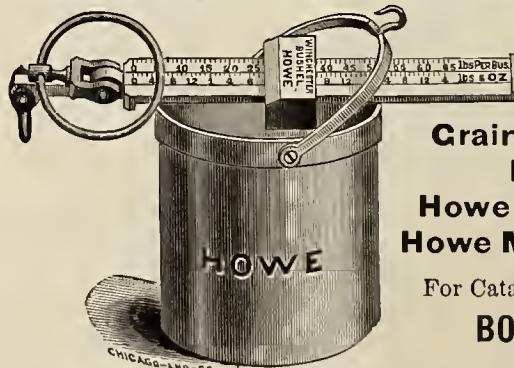
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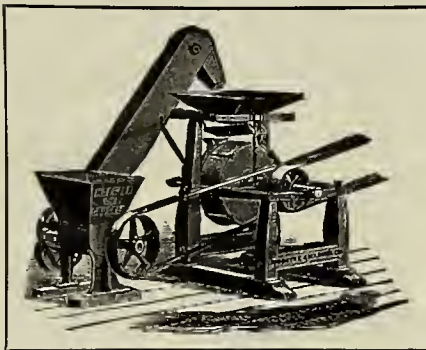
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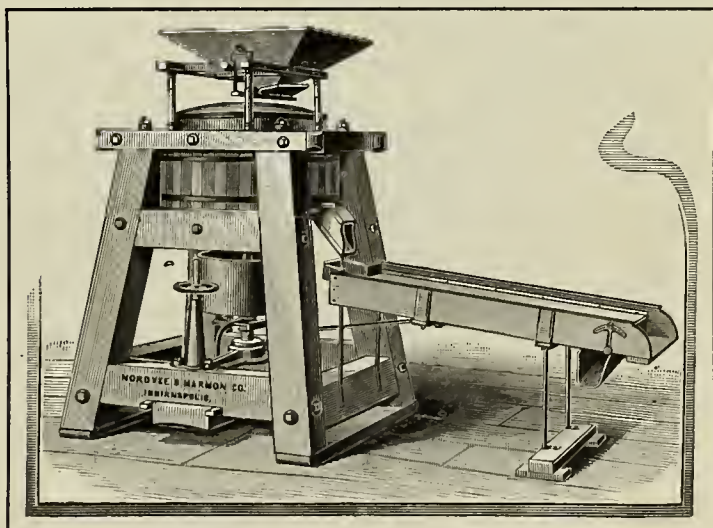
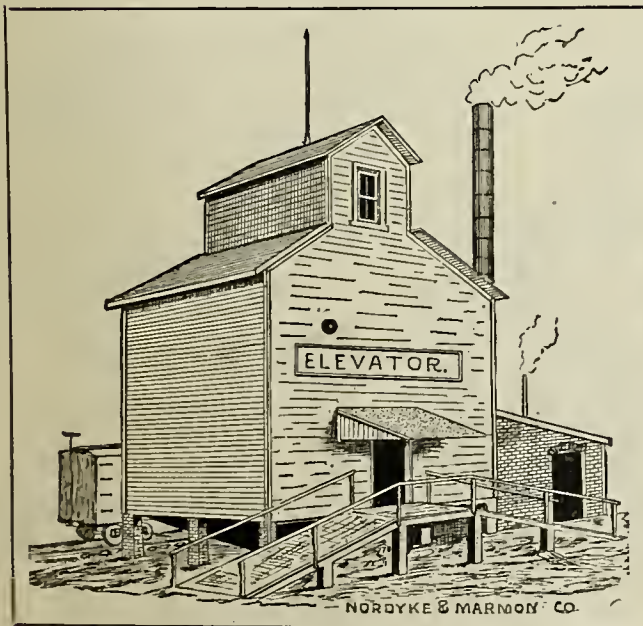
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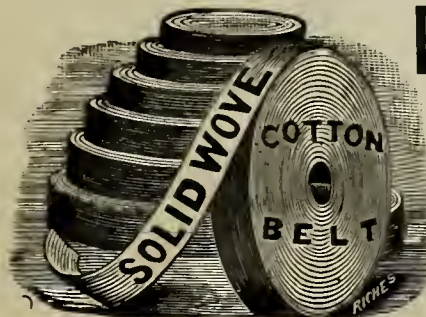
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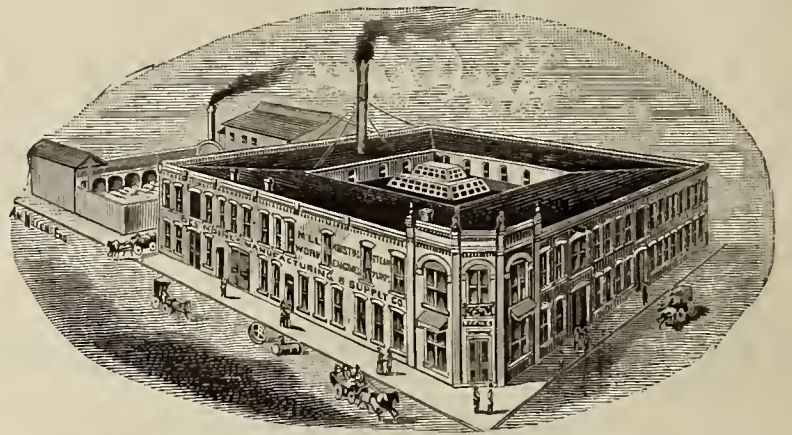
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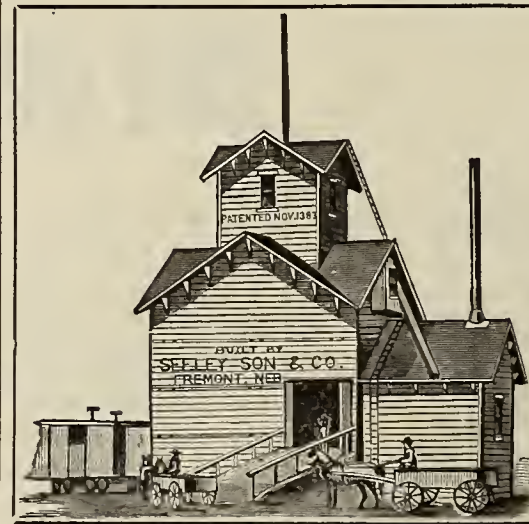
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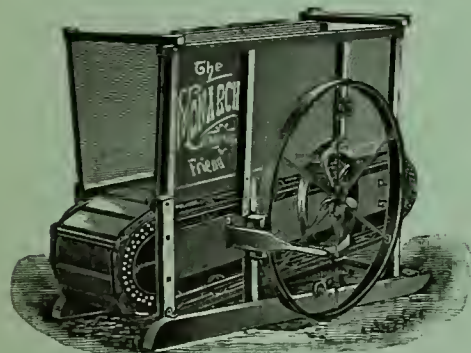
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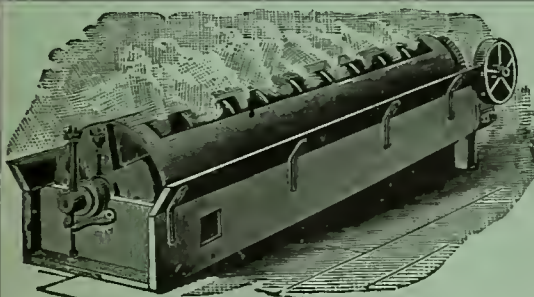
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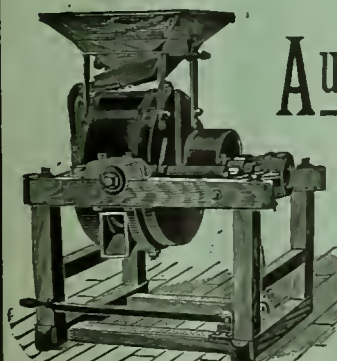


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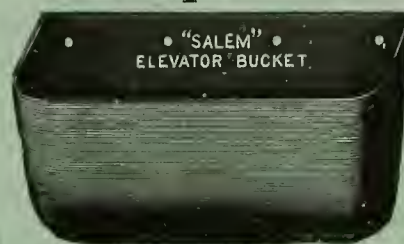
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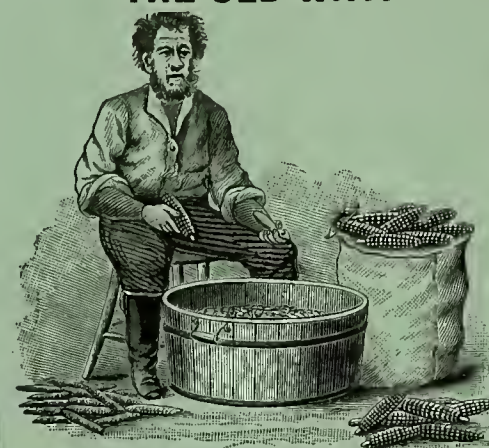
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And we therefore take it as a further compliment to the "SALEM" Bucket that some of its old patrons who were induced to Try the Imitations have now returned to the "SALEM" Bucket, thereby acknowledging it to be the most satisfactory. Don't be deceived by other makes of Buckets that are claimed to be "just as good." Insist upon having the Original and Reliable Salem Bucket. All legitimate Salem Buckets are plainly marked with the word **SALEM**.

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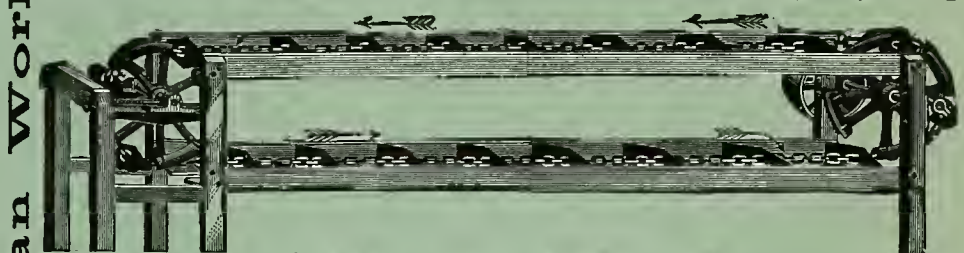
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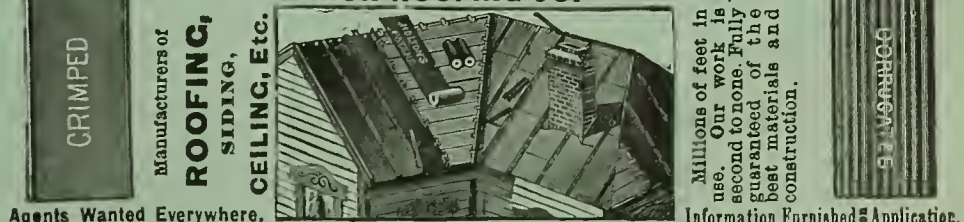
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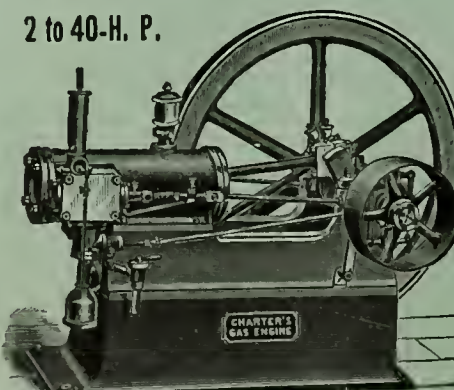
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